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ECONOMICS OF OUTMIGRATION : A STUDY OF KUMAON REGION

THESIS

Submitted to Kumaun University

**FOR THE DEGREE OF
Doctor of Philosophy in Economics**

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1987

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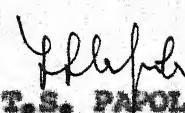
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November 1987


(T.S. PAPOLA)

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PREFACE

Migration is regarded as an uncertain component of changes in population as its behaviour is not as easily amenable to extrapolations and projections as fertility and mortality, the other two variables influencing the population of a region. As a result, it does not feature as prominently in the demographic analysis as births and deaths which have the pivotal role in the growth of aggregate population. But migratory movement of population assume great significance in any socio-economic study of population. Since migration involves the change of place, and occupations of the population, it has important consequences for economic variables like output and employment structure, as also for social change. The effects produced by migration are both positive and negative for areas receiving as well as sending the migrants. Migration puts the pressure on the employment and social services in the receiving areas, particularly in big cities. But it yields substantial benefits to migrant individuals and their families and also to the areas of their origin. Numerous studies have analysed migration from the destination end, while studies from the origin end are only a few. The present study is an attempt to portray the pattern and processes and assess the impact of migration from the viewpoint of the area of origin.

which is significantly characterised by certain special features of a backward economy and sends out a substantial part of its population.

In the course of undertaking this study, I have accounted debts to a number of individuals and organisations whose blessings and cooperation made its completion possible. It is neither possible in the limited space nor is it desirable to name all of them here. But I would be failing in my duty if I do not mention a few of them who made a direct contribution towards the completion of this study. Firstly, I am grateful to Director, Planning Research and Action Division, State Planning Institute, Uttar Pradesh for according me permission to undertake this study.

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to Kumaun University, Nainital for making a special provision of extra time for the submission of my thesis after the expiry of stipulated time within which I could not complete the work due to the pressure of other works.

I have benefitted from the help rendered by various libraries and Government organisations in making available the necessary material and references for this study. Among the libraries, I visited, Library of Giri Institute of Development Studies, Libraries of State Planning Institute, U.P. - Economics and Statistics Division and Planning Research and Action Division and The Amir-ud-daula Public Library deserve the special mention, my particular thanks are due to the staff and authorities of these libraries for their help and cooperation. I am specially thankful to the authorities of Directorate of Economics and Statistics, U.P. and Census Operations, U.P. for permitting me to utilise the information from their records awaiting publication.

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also deserves mention who in addition to shouldering alone the whole burden of domestic chorus, helped me in transferring the information from schedules to mastersheets. I am also grateful to Mr. N.B. Bhatt of Giri Institute of Development Studies for putting painstaking efforts in typing the manuscript on time.

As regards views expressed and interpretations made, these are solely mine and do not necessarily reflect those of the organisations and agencies with whom I am associated.

November, 1987

DS Bhauryal
(D.S. BHAURYAL)

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CHAPTER I

Introduction

1.1 The Problem

Geographical movement of people has been an integral part of the march of human civilisation, in general, and of the process of economic progress in particular. The forms of movements have been both forced and free. In ancient times and middle ages, most of the movements took place in the forms of invasions and conquests.¹ Displacement of people due to natural and political reasons, transfer of slave and indentured labour, deportation of people of foreign origin by natives etc.² may also be cited as examples of forced movements of people. In the absence of catastrophic events, people from the areas of inadequate economic and social opportunities moved to the areas of better opportunities.³ In recent times also,

¹ The invasion of Huns and Magyars into Europe and of Tartar tribes into Asia Minor are the instances of movement of population in gigantic scale (Isaac, J. (1947) : Economics of Migration, London, p.1).

² In modern time, large scale transfer of population took place between Greece and Turkey and Bulgaria in 1923. Before the outbreak of 1939 War Germany entered an agreement with Italy, Estonia and Latvia with regards the transfer of the population of respective origins so as to settle the nationalities on ethnographic lines (Ibid, p.3). After the partition of the country, transfer of a large scale of population took place between India and Pakistan. As regards deportation of slave and indentured labour (see Chapter IV).

³ United Nations (1954) : The Determinants and Consequences of Population Trends, p.98.

considerable flow of skilled workers from underdeveloped countries to developed countries characterised as 'brain drain'⁴ has taken place.

The phenomenon of migration has attracted the attention of social scientists, particularly sociologists and economists from various viewpoints. Some economists have viewed migration mainly as a process of adjustment between demand and supply of labour. It has featured as an element in macro-economic models of development of Nurkse⁵, Lewis⁶ and Ranis and Fei.⁷ The models assume that migration is a process by which labour is transferred from labour surplus subsistence sector to labour deficit modern industrial sector, and thus equilibrium between two sectors

⁴ Ghose, B.N. and Ghose, Roma (1982) : Economics of Brain Migration, New Delhi, p.9.

⁵ Nurkse, R. (1953) : Problems of Capital Formation in Underdeveloped Countries, Oxford University Press, New Delhi, pp.32-33.

⁶ Lewis, W.A. (1954) : "Economic Development with Unlimited Supplies of Labour", in the Manchester School of Economic and Social Studies, May, Vol.22, pp.139-191.

⁷ Ranis, G. and Fei, J.C.H. (1961) : "A Theory of Economic Development", in American Economic Review, Sept., Vol.51, No.4, pp.533-565.

is achieved. The modern industrial sector is characterised by full employment while the subsistence sector by unemployment and disguised unemployment where marginal productivity of labour is supposed to be zero. This process is supposed to continue as long as the disguised unemployment exists in rural subsistence sector and wage rates in urban sector do not go below a certain level.

Sjaastad developed a cost-benefit model of migration based on human investment theory.⁸ The model assumes that a person will move if the present value of all future monetary benefits from moving is greater than the monetary costs of moving. It also assumes that difference between incomes at the place of origin and that of destination is the only benefit and cost of transportation of migrant, his family and other belongings between two points is the only cost. Non-monetary costs and benefits which he found to be important in migration decision making are not included in the model. Another important model based on

⁸Sjaastad, L.A. (1962) : "The Costs and Returns of Human Migration", in Journal of Political Economy, Oct, Part 2, pp.80-93.

income differentials is developed by Todaro.⁹ He postulates that migration is a product of the consideration of relative costs and benefits in which financial factors play dominant role rather than psychological. "Expected" urban-rural wage differentials and probability of obtaining urban modern sector employment is a deciding factor in migration decision making. Probability of obtaining an urban job is negatively related with urban unemployment rate. Continued urban-rural "expected" income differentials are likely to maintain a higher rate of rural-urban migration than the growth rate of urban job opportunities. In underdeveloped countries, serious imbalances in job opportunities in rural and urban areas are supposed to create high rate of urban unemployment.

Later on, Todaro model was extended to which is known as Harris-Todaro model.¹⁰ Both the versions of the model consider that urban economy is divided between traditional and modern sectors. Wages are low in the

⁹Todaro, M.P. (1969) : "A Model of Labour Migration and Urban Unemployment in Less-developed Countries", in American Economic Review, Vol.59, No.1, pp.138-148.

¹⁰Harris, J. and Todaro, M.P. (1970) : "Migration Unemployment and Development : A Two-sector Analysis", in American Economic Review, March, Vol.60, No.1, pp.126-142.

former and higher in the latter. In the first stage, rural migrant gets job in traditional sector or remains unemployed waiting for modern sector employment. It is assumed that if migrant succeeds to obtain modern sector job, life-span earnings of this sector will offset the losses, incurred in working in low wage jobs in traditional sector and or during initial unemployment. A migrant is supposed to be acting rationally till the present value of expected life time income exceeds the present value of rural income and cost of relocation.

Inspite of holding some element of truth regarding the process of migration these models are unable to explain the causes and consequences of migration¹¹ in their totality. Each of them suffer from one or other shortcoming. As regards the model of development, the assumption of zero marginal productivity of labour in agriculture, does not stand valid empirically. Contrary to it, number of adjustments in agricultural pattern have to be made to fill the gap created by migrant males.¹²

¹¹ Dasgupta, B. (1979) : "Migration and Rural Employment", in Land Reform : Land Settlement and Cooperatives, No.1, (Rome FAO), pp.23-34.

¹² See Chapter VIII.

The assumption of a high rate of expansion of capitalist sector so as to take away most of the disguisedly unemployed from subsistence sector does not seem to be realistic. The rate of growth in industrial sector in many developing countries has been too low to permit such a shift. As a result of migration, un-employment and under-employment from rural sector has been transferred to urban sector in number of cases.¹³ Moreover, the essence of the model lies in the inter-sectoral rather than geographical migration.

Models based on income differentials are also not free from blemishes. Apart from methodological and conceptual weaknesses as regards to estimating the incomes and their differentials, the assumption regarding the homogeneity of skills etc. of migrants are not supposed to be sound.¹⁴ Researchers also put figures even on the assumptions like migrant's preference for modern sector jobs, constantly lower wages in traditional sector as

¹³ Oberai, A.S. and Singh, H.K. Manmohan (1983) : "Causes and Consequences of Internal Migration : A Study of Indian Punjab", Delhi, p.27.

¹⁴ Oberai and Singh, op. cit, p.29.

compared to modern sector, decision to move as "once for all" decision etc.¹⁵ Exclusion of non-economic factors is a major shortcoming of these models. The implicit assumption of the models entailing continuous weighing of costs and benefits by every-one and then deciding every-time whether or not to move, is not in conformity with reality. The assumption may hold for some professionals but not for most people.¹⁶ Economists argue that income differential itself is not a cause but a symptom of rural-urban disparities associated with number of factors e.g. inequitable distribution of resources, inequality in land ownership pattern etc. For better understanding of causes of migration, they lay emphasis, first of all, on the analysis of macro economic factors causing rural-urban differentials. They also draw a distinction between broad socio-economic structural factors and the specific mechanisms such as unemployment and wage

¹⁵ Gaud, T (1976) : "Causes and Repercussions of Rural Migration in Developing Countries : A Critical Analysis, Geneva, ILO; Minographed World Employment Programme Research Working Paper, Quoted by Oberai and Singh, op. cit.

¹⁶ Spear, Alden Jr., Goldstein, Sidney, Frey, William H. (1974) : Residential Mobility, Migration and Metropolitan Change, Cambridge Mass, p.170.

differentials, through which structural factors operate.¹⁷ Moreover, it has been found difficult to identify and measure all relevant costs and benefits, both monetary and non-monetary. They provide only partial analysis of mobility process and fail to explain the variation in the propensity to move for different areas and different types of people.¹⁸ Further-more, lack of integration of micro-level factors which seek to explain why individuals move and macro-level factors which relate to aggregate conditions influencing mobility rate reduce the utility of these models for explaining the migration phenomenon.

Migration is a complex process which varies over space and time in its scale, pattern and causes. The relative importance of all migrations is not the same as the factors responsible for migration and their effects are different in nature. In any case, the physical, economic, demographic, cultural and political factors responsible for migration vary in magnitude in different situations. Interaction of these factors is so complex as every one who is able to migrate, does not do so nor does every one who wants to migrate, is able to do so.

¹⁷ Oberai & Singh, op. cit. pp. 29-30.

¹⁸ Spear, et.al., op. cit., p.174.

Evidences from the studies suggest¹⁹ that both macro and micro level factors induce migration. Macro factors are aggregate of the conditions prevailing in certain areas, which, in general, create a situation for individuals to move while micro factors are personal attributes of individuals which make them prone to move in comparison to those who do not move. Macro-factors denote inequality or maldistribution regarding availability of land, local off-season opportunities, job diversification within the village, village location and communication and general level of living.²⁰ High pressure of population causing a high man/land ratio, degree of commercialisation of agriculture, and social customs and stratification also play important role in inducing migration from an area. Educational and medical facilities, cultural and entertainment activities, presence of friends and relatives in urban areas also encourage youths to break away from traditionally inhibiting rural social structure. Migrants from both poorer as well as richer sections of the society join the stream.

¹⁹ For details see Chapter V.

²⁰ Connell, J., Dasgupta, B., Laishley, R. and Lipton, M. (1976) : Migration from Rural Areas - The Evidence from Village Studies, Delhi, p. 202.

Migration is mainly selective by personal attributes like age, education and sex. Migrants are generally found in age group 15-29 years. Older people migrate less both because the return on investment in human capital declines with age, and older people develop stronger attachment to their property and family. Migration for marriage as well as education is also a speciality of the lower ages. Since educated have higher capacity to earn in urban areas propensity to migrate among them is relatively higher. Moreover, willingness for manual work and desire to live in rural areas decline with education. Barring some Latin American²¹ exceptions males predominate females among migrants in developing countries.

1.2 Why This Study

In developing the theories and models of migration, an attempt has been made to single out one or a few more factors supposed to have ubiquity in their application in inducing migration. Similarly, the results of empirical

²¹Evidence shows that in Latin American countries short distance streams to the cities are predominated by females (Brewing, H.L. (1971) : "Migrant Selectivity and the Growth of Large Cities in Developing Societies", in Rapid Population Growth : Consequences and Policy Implications (ed.,) R. Revelle, Baltimore, pp.272-314.

studies, conducted in different parts of the world (of course, with different focus and emphasis) vary as regards the causes and consequences of migration. Dissimilarities can be attributed to diversities among areas and regions and difference in methodologies adopted in conducting these studies. Moreover, most of the studies on migration have traditionally adopted neo-classical equilibrium approach or cost-benefit approach and do not properly take account of the differential impact that it produces on the areas sending migrants out and those receiving it. In practice, it is observed that migration is a spatially selective process, there are areas which generally send people out and others which generally receive them; and the effects of migration are certain to be different in these two types of areas. The areas receiving migrants are, generally, big industrial and metropolitan towns; and the impact of migration on these urban centres in the form of growing unemployment, over-crowding and relative shortage of public amenities are well studied. India is facing a grim situation in this regard. The concern of Government of India to this problem was reflected in Sixth Plan document in which break down of all civic services in major cities is feared and policy recommendations to adopt drastic measures to restrict the population

growth in urban conglomerates are made.²² But little research has been done to analyse the causes and consequences as regards the areas which generally send the migrants out. With this end in view, we propose to undertake a study of out-migration in a region of the State of Uttar Pradesh which has constantly been losing its population as balance of migration for decades.

Uttar Pradesh is one of the highly populated states of India but lags behind in its economic development in comparison to most of the states of the country. As a result, a sizable population of the State migrates to other states in search of employment. Even in Uttar Pradesh, a study of migration of the areas sending the migrants out in substantial number would be interesting and useful, particularly because these areas also happen to be backward and depressed. We propose to make such a study of migration from Kumaun region, situated in the hills of Uttar Pradesh, which sends out a sizeable proportion of its population out as migrants.

The rationale of studying out-migration from Kumaon are two-folds. Firstly, the area is marked by its

²² Government of India (1978) : Draft Five Year Plan: 1978-83, New Delhi.

geographical peculiarities where the topographical constraints make the use of scientific and technological advancement difficult. Secondly, most of the hill districts of Uttar Pradesh have a much higher degree of out-migration and net migration as compared to the average of all districts of the State. The figures of inter-district out-migration of 1971 Census²³ suggest that out-migration as percentage of population was highest from two constituent districts of the region. It was 13 per cent from Almora and 11 per cent from Pithoragarh as against 7 per cent of the average of all districts of the State. Net out-migration from these two districts stood at 9 and 7 per cent respectively of total population. Out-migration of substantial order as is observed in Kumaon, particularly in Almora and Pithoragarh, is likely to affect the structure of labour force and productive capacity of the region. Demographically, age structure and sex ratio are the two variables which get directly affected. We observe an abnormally high sex ratio prevailing in the region. In 1981 the proportion of females

²³The figures were compiled from unpublished Census records.

per thousand of males in the region was 946 as against 885 in the State as a whole. In the districts of Almora and Pithoragarh, it was as high as 1081 and 1014 respectively. By age groups, in 1971 female per thousand of males were recorded as 1288 and 1195 in 15-39 years and 1015 and 993 in 40-59 years in Almora and Pithoragarh respectively. Since most of the out-migrants happen to be able bodied persons, the quality of labour resources of the region is adversely affected.

The adverse effect of out-migration on man-power resources of the region have their secondary effects on production and productive capacity. The hypothesis that the migration is beneficial because the migrants do not contribute to production in the native place is not always true because the implicit assumption that the labour has zero marginal productivity, is not empirically valid. The remittances might bring in immediate benefits to the area but these benefits may not always be high enough to compensate for the loss of long term productive activity that out-migration may cause. Besides, remittances tend to transplant a consumption pattern in local economy which has no potential for generating multiplier effect locally. It is, therefore, necessary to look at the

entire range of short as well as long term consequences of out-migration with a view to getting an over-all assessment of the process.

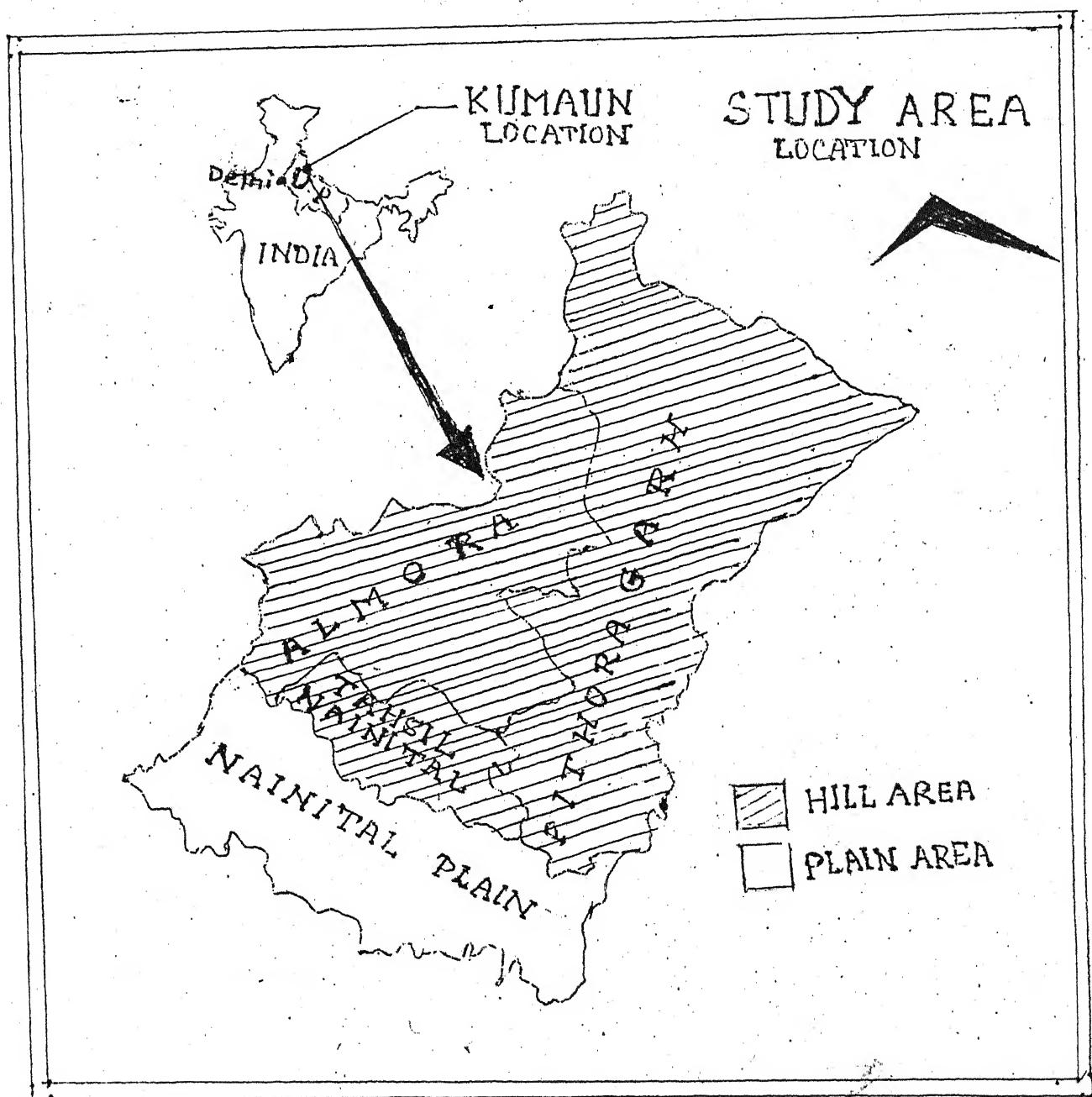
1.3 Scope, Objective and Method

(a) Locale of Study : As stated earlier, the study is confined to the Kumaon Division situated in the hills of Uttar Pradesh. Kumaon region²⁴ is constituted by districts of Almora, Pithoragarh and Nainital. Former two districts are entirely hilly while the Nainital is partially hilly and rest of its area lies in plains. The region is the northern-most part of Uttar Pradesh. The area and population of the region constitute 7 per cent and 2 per cent respectively of the total population and area of the State.

Including Nainital tehsil of district Nainital, 71 per cent of area of the region is in the hills and rest 29 per cent in the plains.²⁵ On account of topographical hazards, only 19 per cent of total reported area is under

²⁴ Details of Area and population in Chapter II.

²⁵ Many parts of tehsil Haldwani may be mountainous but due to non-availability of relevant figures we treat only Nainital tehsil of the district as covered by mountains.



cultivation in the region. This proportion is still lower in Almora (15 per cent) and Pithoragarh (11 per cent) districts. About 55 per cent of the area is under forests. Only 39 per cent area of net area sown is irrigated in the region, but the proportion of irrigated area in the districts of Almora and Pithoragarh is barely 10 and 9 per cent respectively. Primitive agriculture is the mainstay of the population as 78 per cent of the total workers are engaged in the primary sector.

The plain portion of Nainital is well developed and tends to distort the regional profile as a whole. Heavy in-migration in Nainital plain is also likely to distort the position of net-migration from the region as a whole. The entire hilly part of Kumaon is universally characterised as backward and underdeveloped and marked as the area denuded of its able bodied male population due to high degree of out-migration. Lack of separate set of statistics for hilly part of the region circumscribe the clear-cut analysis of the problem. Even then, to make the study more pertinent to problems of backwardness and high proneness to out-migration separate analysis of hill and plain part are attempted wherever data permitted.

(b) Objectives of the Study : The study aims at the analysis of process of out-migration from the region with a view to assess the entire range of its causes and consequences. The specific objectives of our study are as follows :

- i. To study the characteristics of area, population and structure of economic activities which provide the macro-level basis for out-migration;
- ii. to study the nature and extent of out-migration;
- iii. to study the characteristics of migrants; and process and causes of their migration;
- iv. to study the effects of migration on labour force and demographic structure;
- v. to study the flow and use of remittances and thereby to assess the gains and losses of migration; and
- vi. to study the effects of migration on consumption, production and employment in the perspective of long term economic growth.

(c) Data Base and Methodology : Primarily, our study is based on the secondary sources of information. Sources of information are quoted wherever they are used, even then, a brief reference of them here would be in order.

✓ Data pertaining to population resources, labour-force, migration (nature and extent) are collected from published Census records, some-where unpublished data are also utilised. Besides, the publications of authors, Government and other agencies, relevant information from unpublished works of researchers has also been utilised. Since most of the data of 1981 Census were not published at the time of writing, our analysis is mainly based upon the Census figures of upto 1971, figure of 1981 Census are used wherever they have permitted.

Statistics regarding land utilisation pattern, agriculture, livestock resources, forests, income and enterprises were collected from the records and publications of various government departments e.g. Board of Revenue, Directorates of Agriculture, Animal Husbandry, Forest, State Planning Institute etc.

To study the causes and consequences of out-migration, for which no information is available from secondary sources, recourse ^Y _~ has to be taken to a primary survey. We conducted a survey of eight villages of district Almora. Drawing a representative sample of the region was beyond the limits of our resources and time. As per secondary information the degree of out-migration from district Almora was highest, hence we

preferred the district for our field survey. Selection of the villages was purposive keeping the following characteristics in mind : (i) nearness to road and town, (ii) remoteness from road and town, (iii) representation of all major castes (including scheduled caste) found in the region, and (iv) availability or otherwise of irrigation facilities. The eight selected villages had a total of 330 households all of whom were surveyed. A structured questionnaire was used to collect the information from the households. Besides, detailed questions regarding out-migration, it contained the questions regarding household population, consumption and production patterns, occupational structure, income etc. The questionnaire used is given as appendix III.

To study the pattern of growth and behaviour of population in longer period, we have used data from 1901 to 1971. But in our primary investigation on migration, we have considered out-migrants of last thirty years only. In a period longer than this, an out-migrant loses all his importance for the native place. The reason behind such a long coverage is simply to analyse the changes in the trends and patterns of migration over longer periods, and to understand how an out-migrant relates himself with his origin over-time.

1.4 Major Concepts Used

All the major terms and concepts used in this study are defined in the same way as have been defined by the agencies from whom we have collected the relevant information e.g. for migration we have adopted the definition of Census of India. All such terms and concepts are defined and explained at appropriate places in the chapters dealing with these phenomenon.

It was also found relevant and meaningful to review the literature at appropriate places. A survey of literature on relevant aspect has been given in the beginning of each of the chapters.

1.5 Chapter Scheme

The analysis and findings of the study are presented in nine chapters as detailed below. Present chapter deals with the problem, scope and methodology of the study. Since the macro-factors influence the aggregative rate of migration from an area or region, next two chapters are devoted to the detailed analysis of the area, population and economic activities of the region. Chapter II deals with the characteristics of area and

population while Chapter III gives an account of economic activities in the region. In Chapter IV, we have examined the nature and extent of migration. Chapter V attempts to identify those characteristics relating to villages and individuals, which induce migration. In Chapter VI, we have analysed the causes and process of migration. Chapter VII deals with spatial and occupational pattern of migration and links with origin. In Chapter VIII, we have attempted to examine the effects of migration on demographic profile, output and employment. Finally, the main findings of the study have been summarised to arrive at broad conclusions and suggestions regarding the problem of migration in the region, in Chapter IX.

CHAPTER II

Area and Population

2.1.0 Geo-physical Characteristics

Forming international boundaries with Nepal in the east, Tibet (China) in the north, bordering Garhwal and Moradabad divisions in the west and Bareilly division of the State in the south, Kumaun region consists of the districts of Almora, Nainital and Pithoragarh in Uttar Pradesh. The region extends between $28^{\circ} 27'$ to $30^{\circ} 48'$ north latitude and $70^{\circ} 48'$ to $81^{\circ} 31'$ east longitude in the middle Himalayas. Geographically, the region can be divided in three zones running horizontally parallel to each other; the snowy or the great Himalayas, the sub or lesser Himalayas and the Bhabar and the Tarai belt. The peaks under perpetual snow form the part of the great Himalaya, Nanda Devi (7800 mtrs) being the highest peak of this group. Immediately south to this range lies the sub Himalayas getting snow in winters only. Most of the slopes of this region are covered with forests. At the foothills lies a narrow belt of flat land called Bhabar followed immediately below a damp and marshy tract of plain land called Tarai. This area mostly covered with

thick jungles of valuable woods and tall grasses earlier, has been widely cultivated in the post independence era. Tarai is bestowed with one of the most fertile soils in India.

The region, except the Bhabar and Tarai region making plains part of Nainital district, physiographically lies within the Himalayan system. Highly undulating topography is marked by mass of tangled peaks and valleys. The altitude varies from 300 mtrs at foothills to 7800 mtrs at the summit of Nanda Devi.

2.1.1 Drainage System

Descending in a series of rapid slopes and carving out their narrow channels through the mass of hard rocks, the rivers in the region are roaring torrents. They carry great boulders in the fury of their downward course. The courses of rivers are determined by the direction of watersheds of the mountain ranges and ridges. The major rivers of the region are - the Kali, the Gori, the Dhauli, the Sarju, the Gomati, the Panar, the Pinder, the Ramganga (east), the Koshi, the Ramganga (west), the Sual, the Gagas, the Gola, the Lohvati, the Ladhiya and their numerous tributaries. All major rivers and their

tributaries except the Koshi, the Ramganga (west) and the Pinder follow the south easterly course to join the Kali. The Koshi and the western Ramganga flow to the plains as independent streams. The Kali (Sarda) rises from the Kuthiyancti, and follows a south westerly course demarcating India and Nepal, which runs almost at right angles to the Tibetan watershed. In addition to the Kali, the Dhauli, and the Gori, and the Pinder which flows to Garhwal, rise in the glaciers and the Sarju and the Ramganga at the southern base of the snowy range, while the rest have their source in the oak clad ridges of the sub-Himalaya.

In the hill part of Kumaun the beds of these rivers for the most part are narrow and precipitous. At some places they open out in wide fertile areas where they have deposited alluvial soil and river water is available for irrigation. But such areas are rarely available by the major rivers like the Kali, the Gori and the Dhauli. Rivers rising at the southern base of snowy range like the Sarju and the Ramganga (east) and their tributaries provide but a little scope for wide fertile valleys and irrigation. Wide fertile areas or "alluvial

fans"¹ are mostly available with the rivers rising at the oak clad forests such as the Koshi and the western Ramganga and their tributaries. The larger rivers have little effects on irrigation and cultivation while smaller streams provide ample opportunity for wide use as their water is more easily available.

In the hilly region of Kumaon, accessibility to the area is provided by opening beds of the rivers alone. Even the passes to Tibet are situated on the beds opened by the rivers. Mountain features impose very hard restriction upon the communication links.

2.1.2 Climate

The climate of the region is as varied as its topography. The hilly region is situated within the temperate zone. Sea being remote from the region, has no influence upon its climate. The main factors determining climate are heights and directions of mountain ranges and the nature of the soil. The Tarai and the Bhabar tract of the region may be classed under the zone of tropical monsoon climate.

¹ Brunches Jean (1920) : Human Geography, Translated by I.C. Le Comte, Chicago and New York.

About the variety of climate of the region SD Pant² aptly remarks that "it furnishes, like Bolivia, every gradation of climate, from the sultry and suffocating heat of the Bhabars to the Arctic cold of the snow capped peaks". The order of three seasons has close resemblance to that of the plains of upper India. Winter is marked by occasional snow-falls and summer is full of sub-tropical heat followed by the period of heavy periodical rains.

The three seasons are as follows :

Ruri : hot season - the middle of February to middle of June ;

Chaumas : rainy season - middle of June to middle of September ;

Hyun : winter - middle of October to middle of February.

In the first-half of summer, local storm accompanied by thunder and lightning called "Chal basant" are frequent in the vicinity of high mountain. In the second half, haze envelopes the mountain peaks. Days experience tropical heat while nights remain cool. Highest temperature is recorded in the middle of June followed

²Pant, S.D (1935) : The Social Economy of Himalayans, George Allen and Unwin.

Table 2.1 : Mean Monthly Temperature at Different Locations in Kumaon Region
(Centigrades)

	January	Feb- ruary	March	April	May	June	July	August	Septem- ber	October	Novem- ber	Decem- ber
Nainital	6.0	8.7	12.2	16.7	19.2	20.5	18.7	19.2	18.7	17.6	14.2	8.3
Muktеш्वर	5.8	8.1	11.1	15.4	18.7	19.0	17.6	13.3	17.0	14.2	11.2	8.2
Almora	7.9	11.2	14.1	18.1	21.2	23.9	22.5	22.9	22.5	18.5	16.6	10.6
Pithoragarh	7.7	9.8	13.8	18.2	22.0	23.6	23.3	23.3	22.5	20.2	15.5	8.8
Champawat	8.0	12.0	17.0	19.5	19.0	22.0	21.0	23.0	23.0	21.5	20.0	13.0
Dharchula	8.3	13.0	16.1	19.0	22.5	23.8	24.4	25.3	24.4	19.4	15.6	10.6
Ranikhet	7.8	9.6	13.5	18.4	19.9	22.1	20.0	19.5	19.1	16.1	13.2	10.1
Hawalbagh	8.3	12.8	16.1	18.9	22.8	24.4	25.6	26.1	23.9	20.6	15.6	11.1
Tanakpur	20.0	24.5	30.6	34.6	39.6	39.7	36.4	33.0	35.5	34.0	28.3	23.8
Haldwani	13.1	14.1	21.4	25.4	30.5	31.9	30.0	25.4	26.1	25.0	19.6	14.0
Ram Nagar	20.8	23.9	29.9	33.9	38.9	39.7	35.7	32.4	31.7	33.4	27.7	23.3
Khichcha	21.1	24.9	32.0	34.9	39.9	40.6	36.7	32.2	32.8	28.7	26.0	21.9

Source : D.R. Joshi, et.al, General Characteristics of Climate in Kumaon, In O.P. Singh (ed.), The Himalaya : Man, Nature and Culture.

by the break of monsoon. The rains continue upto middle of September, by then temperature begins to fall. October and November are pleasant months. The mean temperature comes down as low as to 5.8 degree centigrades in the month of December in Mukteshwar and goes as high as 40.6 degree centigrades in the month of June in Kichha (Table 2.1). December, January and February are the months of cold spell. Sometimes, snow falls in March and November also. Every winter brings temperature below the freezing point. As a protective measure against the shivering cold of winter, a large population of hilly area used to migrate seasonally to Bhabar with their families and livestock. Such migrants were called "ghamtappas" (sun baskers). More, important, this migration enabled them to utilise the slack period after rabi sowing for earning wages in forests, farms of cultivators and markets of Tarai and Bhabars. Seasonal migration from hilly Kumaon to Bhabar has almost come to an end now.

Due to marked variation in physiographical conditions in the hills, climate and temperature vary widely. While the variation exists between closed valleys and exposed peaks on the one hand, and southern plains and mountains and valleys on the other. Sunshine and shade have their

Table 2.2 : Distribution of Rainfall at Different Locations of Kumaon (1972-78)
(In cms.)

Foothills Locations	Locations close to outer ranges		Interior Location in Lesser Himalayas		High altitude locations close to greater Himalayas		Average annual rainfall
	Average	Locations	Average	Locations	Average	Locations	
Tanak Pur	203.4	Chalthi	218.5	Champawat	149.7	Thal	132.6
Haldwani	197.6	Nainital	248.8	Lohaghat	87.2	Munsiyari	216.3
Ram Nagar	147.3	Padwadangar	298.2	Dhunaghat	370.6	Nagling	72.0
Rudra Pur	127.5	Bhimtal	200.5	Pancheshwar	127.6	Dherchula	150.4
Kathgodam	205.6	Mukteshwar	136.0	Pithoragarh	124.2		
		Bhowali	194.2	Jhulaghat	107.7		
				Askot	139.0		
				Berinag	160.0		
				Gangolihat	167.8		
				Almora	106.1		
				Ranikhet	131.3		
				Chaubatia	149.4		
				Kausani	166.7		

Data based on meteorological Department, vol. XXXI, Part III, New Delhi, 1962, Tehsil Records,
Forest Working Plans and Contourment Board, Pithoragarh.

Source : Ibid.

own effect upon climate and temperature. The distribution of temperature in Kumaon is illustrated by figures in Table 2.1.

Like climate and temperature, quantity of rainfall is also determined by physiographical conditions in the region. Relief features, mainly direction and slopes of ridges, govern the distribution of rainfall. Higher ridges with south facing slopes, generally, get higher rainfall while northern slopes get less rains. In Tarai and Bhabar, foothills like Ramnagar, Kathgodam and Tanakpur get higher rainfall than other places. There is a decreasing tendency of rainfall as we move from east to west and north to south in Tarai area. Region-wise distribution of rainfall in Kumaon at different locations is given in Table 2.2.

2.1.3 Soils

Soil varies from place to place depending upon the nature of rocks found in the ridges. The valleys, generally, have alluvial loam mixed with detritus brought down by mountain streams. In the level lands above river beds, loam mixed with gravel is found. The gentle slopes are either sandy and aggrillaceous according to the aspect.

Newly broken lands mostly possess stones. Tarai and Bhabar being areas of shallow water table, possess fine deep alluvial soil rich in clay.

It is said that the layer of productive top soil in the Himalayan region is very thin and if once it is washed away, regeneration takes a very long period of time. Soil erosion is more pronounced in this region than anywhere else in the State.³ Due to the gradual depletion of forests, extension of cultivation and other development works, Himalayan region is reported to be losing 5,100,00 tons of valuable nitrogen costing about 7,000 million rupees a year.⁴

Almost all the soil types suitable for crop production are either non-existent or exist in insignificant proportions.⁵ Modern soil capability surveys which classify the

³ Pant, S.D., op. cit., p.33. The remark made in 1935 when Pithoragarh formed the part of Almora district, is equally valid for hill part of Nainital district also.

⁴ Maithani, B.P. (1978) : "Combating the Flood Menace", Himalaya : Man and Nature, Vol.2, No.5, October 1978, p.20.

⁵ Shah, S.L. (1983) : "New Approaches and Strategies for Land and Water Resource Use Planning and Management in the Hills of Uttar Pradesh", Development of Hill Areas: Issues and Approaches, p.405 (eds.) T.S. Papola, B.K. Joshi, H.S. Verma, R.C. Sinha, Himalaya Publishing House, Bombay.

soils in 8 to 12 classes for appropriate land-use are costly and time consuming; and are not conducted in large enough numbers in the hills where more than 33 classes of soil are supposed to exist. First two of these soil classes are supposed to be suitable for intensive cultivation and for growing more than one crop. Class third soil is recommended for growing cash crops with improved practices. Two of the modern soil surveys, though insufficient in number, suggest that the soil belonging to first two classes does not exist in the region. In some places, a very low proportion (below 15 per cent) of the land comes under the third category of soil. Majority of the land in the region which possesses the soil belonging to rest five classes is supposed to suit the orchards, permanent vegetation and tree cover.⁶ It indicates that only the lands in river valleys are suitable for crop production and the lands in slopes are not suitable for crop production either from the view point of productivity or conservation. Soils in the valleys where terraces are wide and irrigation is available through water channels, is rich. But such areas,

⁶Ghildyal, B.P., Sharma, A.K., Kumar Virendra (1975): "Soils of Kumaun and Garhwal Hills of U.P. : Their Potential and Problems" - Paper presented at the Seminar on Problems and Potentials of Hill Region held in New Delhi, April 22-25, 1975; also see Report of the National Bureau of Soil Survey and Land Use Planning, IARI, New Delhi.

according to one estimate, comprise only 10 per cent of the total cultivated land of the region.⁷ Rest of the villages situated at the height from 1000 ft to 7000 ft. have soil with shallow and low in humus content having no moisture retaining qualities. Without organic manure with cowdung as its major component, cultivation of rain fed crop is next to impossible. Use of chemical fertiliser without cowdung is harmful because the soil lacks humus content and moisture retaining capacity for which there is no alternative to cowdung.⁸

2.1.4 Forests

Forests fulfill numerous economic needs of local people in the hills and are a big source of revenue to Government on the one hand, regulate the ecological balance of whole of the Northern India, on the other. In 1952, at the time of formation of forest policy, area under forest was 23 per cent of total geographical area of the country. In spite of the resolution to increase this area upto 33

⁷ Ashish, Sri Madhav (1979) : "Agricultural Economy of Kumaon Hills : Threat of Ecological Disaster", Economic and Political Weekly, Vol. XIV, No. 25, June 1979, p. 1059.

⁸ Ibid.

per cent, it has declined to bare 12 per cent after three decades. According to official statistics more than 60 per cent of geographical area in U.P. hills is under forest. Based on satellite imageries it has been estimated to be only 38 per cent⁹ while another estimate puts it at 41 per cent¹⁰. These different estimates are not necessarily conflicting. According to official statistics forests area includes area under snow, high level blanks and area under pastures etc., while other figures regarding forest area seem to refer to area with tree cover only. Leaving aside area under snow and high level blanks and pastures, area under forests comes to 40 per cent according to official statistics also. Figures based on satellite imageries seem to be more accurate as they are based on more scientific investigation. All these figures, however, fall far short of norm of 66 per cent of forest areas under forest for the hills.

According to official statistics, 55 per cent of geographical area in Kumaon is under forests. Of the

⁹ Gupta, P.N. (1983) : "Land Use Policy in Himalayas and Shivaliks", in Development of Hill Areas : Approaches and Issues; op. cit, p.395.

¹⁰ Chengappa, Raj (1982) : India Today, March 15.

Table 2.3 : Forests under the Control of Different Agencies in U.P. and Kumaon
(1981-82)

Under the control of Forest Depart- ment	Under Civil and Soyam Forest			Panchayati Forest			Private and Municipal Forest			Total Forests		
	Area	Percen- tage	Area	Percen- tage	Area	Percen- tage	Area	Percen- tage	Area	Percen- tage	Area	Percen- tage
Almora	149481	37.9	182100	46.2	62799	15.9	52	0.01	394432	100.00		
Pithoragarh	137844	41.7	121000	36.6	71445	21.6	—	—	330289	100.00		
Nainital	360478	89.5	19200	4.8	20767	5.2	2195	0.50	402640	100.00		
Kumaon	647803	57.5	322300	28.6	155011	13.7	2247	0.20	1127361	100.00		
U.P.	4068718	79.4	801363	15.6	236800	4.6	19772	0.40	5126653	100.00		

Source : Forest Statistics in U.P., Conservator of Forests, Research and
Development Circle, U.P.

total area under forest, 57 per cent is under the control of forest department, 29 per cent under civil and soyam forest and 14 per cent under Panchayati and municipal forests (Table 2.3). Highest area under the control of forest department is in district Nainital (89 per cent) followed by Pithoragarh (42 per cent) and Almora (38 per cent). Area under civil, soyam and panchayati forest is highest in Almora followed by Pithoragarh, district Nainital has very low percentage of these forests. Area under municipal forests is negligible.

Forests in the hills and tarai of Kumaon are depleting at a fast rate due to the increasing pressure of human and livestock population, rehabilitation programmes, commercial exploitation, construction of roads, dams and other developmental works. According to Dr. S.L. Sah, 40-50 per cent of these forests are of poor density and do not fulfill the requirements of optimum density for effective soil and water conservation.¹¹ In a study of Almora and Nainital forest circles, it has been found that forest with density of 60 per cent and above are only

¹¹ Sah, S.L., New Approaches and Strategies for Land and Water Resource Use Planning and Managements in the Hills of Uttar Pradesh, in Development of Hill Areas : Issues and Approaches, op. cit, p.397.

2-6 per cent in these areas.¹² Position of civil, soyam and panchayati forests has gone bad to worst. They have disappeared on a large part accentuating soil erosion. Reserved forests are burdened with rights and commercial exploitation ; besides, illegal exploitation is also rampant. According to Raj Chengappa, 26 per cent exploitation of forest takes place illegally in U.P.¹³

Figures of major forest produce of Kumaon and U.P. for the year 1981-82 are presented in Table 2.4. Of the total produce of timber and fuel in U.P., 36 and 42 per cent respectively belongs to Kumaon hills. 58 per cent of the total rasin is extracted in Kumaon, contributing 56 per cent income of the total income generated by rasin. It indicates, that Kumaon forests are good source of revenue to U.P. forest department.

A conflict between forest department and people of Kumaon and Garhwal regarding rights and controls is going on since long. Department seeks preservation and

¹²Pathak, S (1983) : "Sarkari Ankare aur Banon ki Ashaliat", in Pahar (in Hindi), October, Vol.I, p.138.

¹³Chengappa, Raj, op. cit.

Table 2.4 : Major Forest Produce of Kumaon and U.P.
(1981-82)

	Timber		Fuel		Resin	
	Quantity (cu.m.)	%	Quantity (cu.m.)	%	Quantity (cu.m.)	%
Almora	36349	5.5	111462	6.3	N.A.	—
Pithoragarh	44917	6.9	37833	2.2	N.A.	—
Nainital	157067	24.0	589130	33.7	N.A.	—
Kumaon	238333	36.4	738425	42.2	82800	58.6
U.P.	655365	100.0	1749806	100.0	141241	100.0
					32890766	55.9
					58882410	100.00

Source : Ibid.

extention of forests for more commercial use, while local people seek rights to cultivate forest land, for fodder, fuel, timber and agricultural implements etc. Both are losing the battle in the face of nature's wrath caused by large scale depredations.¹⁴ Due to the large scale denudation of earth by human beings and livestock, run off of rain water has increased - causing the drying up and reduction in the water of fountains turning perennial streams into a seasonal ones.¹⁵ Increased run off carrying silt causes floods and destroys the fertility of soil by spreading sand and other undesirable material on the fields in the plains. Dr. Valdiya observes that due to the large scale depletion of forest, ferocity of temperature has increased; quantum of rains has decreased; and pollution of environment has gone up.¹⁶ The ecological balance of northern India as a whole is, thus, disturbed by the large scale denudation of forest in the hills and tarai belt.

¹⁴ Sah, S.L., op. cit.

¹⁵ Valdiya, K.S. (1983) : "Hamhi Logon ne Chhin Liya Hara Dupatta Dharati Ka", Pahar (in Hindi), October, Vol. I, p.136.

¹⁶ Ibid, p.137.

2.1.5 Minerals

State of Uttar Pradesh is endowed with a few mineral resources. Major part of the State being covered by alluvium, known mineral resources are confined to Himalayan region in the north and Bundelkhand in the south. According to mineral map of U.P. prepared by National Council of Applied Economic Research, New Delhi,¹⁷ copper, graphite, magnesite, ochre, quartz, sand stone, talc are the important minerals found in the Kumaon region of the State. But the explorations by Geological Survey of India and others¹⁸ claim that there are good deposits of dolomite, limestone and gypsum in Kumaon. Economic viability of exploitation of these minerals is yet to be assessed. Effects of exploitation of these minerals on ecology and environment will be an important point of consideration.

¹⁷ Techno-Economic Survey of U.P., NCAER, New Delhi, 1965, p.91.

¹⁸ Valdiya, K.S. (1976) : Kumaon Ki Khanij Sampada, Uttrakhand Bharati, Kumaun University, Nainital.

2.2.0 Population Characteristics

Population of Kumaon region in 1981 was 23.8 lakhs accounting for 2.1 per cent of the population of Uttar Pradesh (Table 2.5). Of the total population of the region, 48 per cent, resides in Nainital district having only 32 per cent of the geographical area of the region. Almora and Pithoragarh districts account for 31.8 per cent and 20.5 per cent of the region's population respectively having 25.6 and 42.1 per cent of geographical area of the region. 15.8 per cent population of Nainital district resides in Nainital hills which consists of Nainital Tehsil of the district. Viewed from the angle of hill and plain, 71.2 per cent of geographical area of the region lies in the hills and rest 28.8 per cent in the plains accounting for 59.8 and 40.2 per cent respectively of the total population of the region.

Proportions of male and female population in total population in the region as a whole (51% male and 49% female) are not very different from that in the State (53% male and 47% female). But districts-wise figures for the region present a very different picture. Nainital district presents a high (54.3 per cent) proportion of male and a low (45.7 per cent) proportion of female population

Table 2.5 : Bird's Eye-view of Some Demographic Feature of Kumaon and U.P. Through 1981 Census

Particulars	Almora	Pitho- ragarh	Nainital	Naini- tal hills	Kumaon region	Uttar Pradesh
Area (sq.kms)						
	T 5385.0	8856.0	6794.0	744.0	21035.0	294411.0
	R 5347.3	8820.0	6711.1	724.9	20878.7	289850.6
	U 37.7	35.7	82.9	19.1	156.3	4560.4
Population						
T-P	757373	489267	1136523	179589	2383163	110862013
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
M	363980	242900	617386	95712	1224266	58819276
	(48.06)	(49.65)	(54.32)	(53.30)	(51.37)	(53.06)
F	393393	246367	519137	83877	1158897	52042737
	(51.94)	(50.35)	(45.68)	(46.70)	(48.63)	(46.94)
R-P	709777	462248	824080	147413	1996105	90962898
	(93.72)	(94.48)	(72.51)	(82.08)	(83.76)	(82.05)
M	335124	227161	445845	77303	1008130	48041135
	(47.22)	(49.14)	(54.10)	(52.44)	(50.50)	(52.81)
F	374653	235087	378235	70110	987975	42921763
	(52.78)	(50.86)	(45.90)	(47.56)	(49.50)	(47.19)
U-P	47596	27019	312443	32176	387058	19899115
	(6.28)	(5.52)	(27.49)	(17.92)	(16.24)	(17.95)
M	28856	15739	171541	18409	216136	10778141
	(60.63)	(58.25)	(54.90)	(57.21)	(55.84)	(54.16)
F	18740	11280	140902	13767	170922	9120974
	(39.37)	(41.75)	(45.10)	(42.79)	(44.16)	(45.84)
Population of Scheduled Castes						
	155710	95145	187213	44413	438068	2345339
	(20.56)	(19.45)	(16.47)	(24.73)	(18.38)	(21.16)
Population of Scheduled Tribes						
	2145	17337	73998	280	93840	232705
	(0.28)	(3.54)	(6.51)	(0.16)	(3.94)	(0.21)
Density (per sq.km.)						
T	141	55	167	241	113	377
R	133	52	123	203	96	314
U	1262	757	3769	1684	2476	4363
Sex Ratio (Females per 1000 of males)						
T	1081	1014	840	876	947	885
R	1118	1035	848	907	980	893
U	649	717	821	748	791	846
Literacy (%)						
P	37.76	39.08	37.81	48.80	38.05	27.15
M	56.66	58.12	46.81	63.54	51.98	38.76
F	20.27	20.30	27.10	32.01	23.33	14.04

Note : i. T = Total; R = Rural and U = Urban

ii. Figures in parenthesis denote percentages.

Source : Census of India 1981, Part II-B, U.P., Primary Census Abstract.

in comparison to the region as a whole and the State. The other two districts of the region viz., Almora and Pithoragarh have the reverse position. Male population constitutes 48.1 and 49.6 per cent only of the total in these two districts respectively. An adverse sex ratio i.e., more than 1,000 females per 1,000 of males has been a distinctive characteristic of the population in the hill districts, in this region.

Percentage of scheduled caste population in the region (18.4) is lower than in the State as a whole (21.2). But the position is reverse in the case of scheduled tribes population (3.9 and 0.2 per cent for Kumaon and U.P. respectively). Among the districts, Almora is on the top with 20.6 per cent of Scheduled Caste population and Nainital is at the bottom with 16.5 per cent but in case of Scheduled Tribe population, the position is just reverse, Nainital being on top with 6.5 per cent, Almora is at the bottom with only 0.3 per cent. Bulk of the Scheduled Caste population in Nainital district is concentrated in Nainital hills having 24.7 per cent of the population.

Density of population in Kumaon (113) is very low in comparison to U.P. (377). Among the districts, Nainital

(167) has highest density of population followed by Almora (141) and Pithoragarh (55). Nainital hills (241) surpasses all other segments of the region in this regard.

Degree of urbanisation in U.P. is relatively low (17.9 per cent), but it is still lower in Kumaon (16.2 per cent). District Nainital (27.5) is far ahead of Almora (6.3 per cent) and Pithoragarh (5.5 per cent). In Nainital district, even the hilly part has relatively high urbanisation (17.9 per cent).

Percentage of literates in Kumaon (38.0) is much higher than in U.P. (26.2) both among males and females. Among the districts, Pithoragarh (39.1) is on the top while Almora and Nainital (38 per cent each) are at par. In case of male literacy, Pithoragarh (58.1) has taken lead, while Nainital (27.1) supersedes others in female literacy. Nainital hills is far ahead of all, both in male (63 per cent) and female (32 per cent) literacy.

2.2.1 Growth of Population in India, Uttar Pradesh and Kumaon : 1901-81

Population in Kumaon has registered a faster increase than in U.P. and India during the present century. It has increased by 205 per cent in 1981 since 1901. The growth

for U.P. (128 per cent) is even slower than India (187 per cent). Population of India has increased by 2.9 times in 1981 since 1901. From 23.8 crores in 1901 it has reached 68.5 crores in 1981.¹⁹ The figures pertaining to decadal growth of population are presented in Table 2.6.

Before 1921, the growth of population in almost all the parts of the country was small and erratic. It was only after 1921, that it assumed a definite trend.²⁰ In 1901-11 Kumaon and its constituent districts witnessed the positive growth of population in the line of India, while U.P. registered a decline attributable to famine, malaria and plague. Hilly part of Kumaon witnessed a fairly high rate of growth in comparison to Nainital plains. A close look at the figures of nainital hills (29 per cent) and Nainital plains (4 per cent) presents an abnormal phenomenon. In-spite of the wide variation in the climate of the two parts, the gap between the rates of growth is very wide. Very low growth rate of Nainital plains is not only attributable to high degree of mortality

¹⁹ Census of India 1981, Series I, India, Part II-B (1), Primary Census Abstract.

²⁰ Census of India 1961, Vol.XV, U.P, Part I-B, Report on Vital Statistics, p.8.

Table 2.6 : Decadal Growth of Population in Kumaon, Uttar Pradesh and India (1901-81)

(percentages)

	Almora	Pithoragarh	Nainital	Nainital Hills	Kumaon	Uttar Pradesh	India							
1901-11	(+)	10.54	(+)	14.28	(+)	3.95	(+)	29.48	(+)	8.50	(-)	0.97	(+)	5.75
1911-21	(-)	13.08	(+)	39.92	(-)	14.42	(+)	5.97	(-)	4.88	(-)	3.08	(-)	0.32
1921-31	(+)	8.88	(+)	11.88	(+)	0.15	(+)	11.01	(+)	6.61	(+)	6.66	(+)	11.02
1931-41	N.A.	N.A.	(+)	5.26	N.A.	N.A.	(+)	13.78	(+)	13.57	(+)	14.23		
1941-51	N.A.	N.A.	(+)	14.92	N.A.	N.A.	(+)	13.19	(+)	11.82	(+)	13.30		
1951-61	(+)	9.80	(+)	27.60	(+)	71.23	(+)	20.26	(+)	32.75	(+)	16.66	(+)	21.63
1961-71	(+)	17.32	(+)	20.64	(+)	37.57	(+)	28.12	(+)	26.00	(+)	19.78	(+)	24.82
1971-81	(+)	16.77	(+)	17.84	(+)	43.50	(+)	23.05	(+)	28.55	(+)	25.49	(+)	24.99
1901-81	117.09	300.96	265.16	310.60	204.70	128.19	197.42							

Note : 1. N.A. = Not available.

11. Pithoragarh was carved out from district Almora after 1961 Census. Primarily it constituted of former Pithoragarh Tehsil. After 1971 tehsil Champawat of district Almora was also included in it. Figures pertaining to these Tehsils are adjusted in favour of district Pithoragarh right from 1901-11.

111. Separate rates for 1931-41 and 1941-51 could not be calculated due to the non-availability of tehsil figures in 1941.

Source : Census Reports, 1901-81.

due to plague but also to the early eviction of tarai and Bhabar by the seasonal migrants of Almora and Pithoragarh due to plague before the commencement of Census enumeration in March 1911.²¹ The next decade 1911-21 witnessed severe influenza epidemic responsible for the decline of population in India, U.P. and Kumaon. World war, malaria, cholera, and plague also contributed towards this decline, but the paramount role was played by the influenza epidemic of 1918²² which claimed about 20 million of lives all over the country.²³ Again, a comparative look at the districts presents an intriguing situation in this decade also. While the figures of district Pithoragarh and Nainital hills show an increase, that of Almora a decline. The growth figure of Pithoragarh (40 per cent) are abnormally high in comparison to Nainital hills (6 per cent); at the same time, the neighbouring Almora has lost its population by 13 per cent. This striking contrast may be explained in two ways: firstly, emigration of contonment population from Ranikhet Cantt. due to World War

²¹ Census of India 1911, Vol.XV, United Provinces of Agra and Oudh, Part I Report, p.78.

²² Adye, Census Report of 1921.

²³ Davis, Kingsley (1951) : The Population of India and Pakistan, Princeton University Press, p.41.

and emigration of two labour crops raised at the time of war to France and Mesopotamia,²⁴ and secondly, high mortality due to epidemics and famine in Almora and the shifting of bilocal and multilocal Bhotias to their high altitude villages lying in the present Pithoragarh district due to cholera and other epidemics.²⁵ Combined growth rate of Almora and Pithoragarh comes to about 1 per cent for the decade.

The decade of 1921-31 is regarded as a turning point in the history of population growth ushering in an era of steady and fast growth of population in India. In this decade, rate of mortality came down to 25.4 from 34.3 prevailing in the decade 1911-21. Kingsley Davis attributes this improvement to reduction of war and banditry in the British rule and control of famines and epidemics.²⁶ Turner

²⁴ Government of United Provinces (1925) : District Gazetteers of United Provinces of Agra and Oudh Supplementary Notes and Statistics, Vol.34, Allahabad : Government Press, pp.16-18; and Kumar, K (1983) : "Population Structure of U.P. Himalayas" in Himalaya : Nature, Man and Culture (ed.) O.P. Singh, pp.124-125 & 142-143.

²⁵ "There was a epidemic of cholera in 1920 which was imported by people returning from Bhabar and caused considerable mortality. Altogether 4366 deaths were registered from cholera". "Influenza which ravaged India in 1918 did not spare Almora in 1919, 1920 and 1921. Influenza in severe form was responsible for many deaths. There was no treatment which seemed to have a really satisfactory influence on the disease" (Govt. of United Provinces, 1925, op.cit., p.16).

²⁶ Davis, Kingsley, op. cit. p.38.

attributes it to freedom from epidemics in a serious form and the relatively better general standard of public health.²⁷ As compared to India, U.P. and Kumaon do not seem to have fully come out of the grip of epidemics and due to the fall in birth rate as its after effects,²⁸ and scarcities, rate of population growth continued to be low. Nainital plains seems to be worst sufferer with 0.1 per cent of the rate of growth in the district as a whole while Nainital hills records 11 per cent rate of growth (Table 2.6). The decade of 1931-41 witnessed a remarkably accelerated rate of growth in India, U.P. and Kumaon also experienced a higher rate of about 13 and 14 per cent respectively. Among the districts, undivided Almora achieved the growth of about 18 per cent while district Nainital has a low growth (5 per cent), probably due to unabated grip of malaria. The decade 1941-51, though free from famines and epidemics, was a troubled period ravaged by second World War, scarcity, short supplies, political unrest, attainment of Independence and communal disturbances.²⁹ The combined result of all of them was a slow-down

²⁷ Turner, Census of India 1931, United Provinces of Agra & Oudh, Vol. XVIII, Part I - Report.

²⁸ "The birth rate has not shown very great fluctuation except for a significant fall in 1921-30 probably as an after effect of the influenza epidemic which changed the age composition of the population" (Census of India 1961, Vol. XV, U.P., Part I-B, Report on Vital Statistics; p.9).

²⁹ *Ibid.*

in the growth of population to some extent in this decade in India, as well as in U.P. and Kumaon. Among the districts, undivided Almora (12 per cent) recorded the slowest growth of population while Nainital had a relatively higher(15 per cent) growth in 1941-51 attributable to partial control of malaria and influx of refugees from West Pakistan.

From the decade 1951-61 the third phase of population growth in India begins. The period of 1901-21 was marked by the wide-spread famines and epidemics, infighting between native rulers, banditry and war; and the period 1921-51 was marked by a good deal of control of famines and epidemics, reduction in banditry and infighting but prevalence of scarcity, political instability and wars. The period 1951 onwards is characterised by stability and beginning with the era of expansion and economic development. From 1951, India has been experiencing a phenomenally high rate of increase in population. In the last three decades i.e. from 1951-61 to 1971-81, the population of Kumaon has more than doubled, and that of U.P. and India experienced only a slightly lower growth. In the decade 1951-61, Kumaon witnessed unprecedented growth of 33 per cent. Latter two decades also registered a fairly high rate of growth in

comparison to U.P. and India. U.P. surpassed India in 1971-81 while it lagged behind till 1961-71.

During the last eight decades (1901-81), district Pithoragarh has experienced the highest growth of 301 per cent followed by the districts of Nainital and Almora having the overall growth of 265 and 117 per cent respectively. Hilly portion of Nainital has surpassed all by recording the growth of 310 per cent. This growth in percentage terms may seem to be insignificant but it assumes great significance from analytical points of view. Vary wide variation between the growth of the population of two districts forming the parts of one district prior to 1961 is the subject of great interest. The terrains being more easily accessible and more suitable for cultivation in comparison to that of most parts of present Pithoragarh district and Nainital hills, the bulk of early settlers preferred the areas of present Almora district for habitation. But in the later periods, with the growth of population and opportunities of expansion being exhausted, comparatively difficult terrains were intruded by growing population and new settlers. Epidemics and famines of 1901-21 had virtually no effect upon the district. Moreover, the plantation of tea gardens,

permanent settlement of bilocal and multilocal Bhotias, creation of new district and massive development work creating a large number of infrastructural facilities and stationing of armed forces with the strategic point of view contributed to the accelerated growth of population of Pithoragarh district.

In 1951, the population of district Nainital constituted 30 per cent of Kumaon's population,³⁰ but an exceptionally high population growth (71 per cent) in the district during 1951-61, raised this proportion to 48 per cent.³¹ A relatively very high growth was registered in the subsequent decades as well. This pulled the average growth rate of Kumaon higher than that of U.P. and India. The plain part of Nainital district has been main contributor to this process. During 1951-61, Nainital plains recorded the growth of 91 per cent while Nainital hills experienced only 20 per cent growth in its population. In subsequent two decades too, the population of Nainital district grew with a steadily faster rate i.e. 38 per cent in 1961-71 and 43 per cent in 1971-81. During the last decade, population growth

³⁰Census of India 1951, Uttar Pradesh, General Report.

³¹Census of India 1981, Part II-B, Uttar Pradesh, Primary Census Abstract.

of Nainital district has been the highest among the districts of Uttar Pradesh.³²

The reasons for such a high growth of population in plain as well as hill part of the district are many-fold. The land of Nainital tarai is most fertile in whole of the Uttar Pradesh. Therefore, a large number of people came in search of arable land and settled there. A massive anti-malaria campaign during post independence period has made the tract of tarai habitable.³³ Consequently, it has reduced mortality to a large extent on the one hand, and attracted immigrants, on the other.³⁴ Besides, a huge number of refugees from Sindh, Punjab, East Pakistan (Bangladesh) and many other regions came to settle in these areas under rehabilitation programme during the post-Independence period. Allotment of land to retired soldiers and freedom fighters added further to the numbers.³⁵

³²Census of India 1981, Part II-B, U.P., op. cit.

³³Census of India 1961, Vol.XV, U.P., Part I-B, op. cit.

³⁴Khanka, S.S. (1983) : Labour Force, Employment and Unemployment in a Backward Economy, Unpublished Ph.D. Thesis.

³⁵Pandey, G.C. (1977) : Uttrakhand Ki Artha Vyawastha, (in Hindi), Counsil Publishers, Nainital, p.31.

High fertility and productivity of land has allured a good number of unauthorised occupants and land grabbers also. A good number of Tibetan refugees in their open air roadside shops may be found in all the urban centres of the district. Nepalese crossed over as wage labour from time to time to the plain part of the district. Establishment of G.B. Pant University and number of public and private sector enterprises have added new dimensions to the human settlement in the area. Moreover, large number of migrants as share croppers, agricultural labourers, forest and other wage labourers come to the area seasonally and permanently from hill tracts of Kumaon, neighbouring Rampur, Moradabad, Bareilly and Bijnor districts; and eastern Uttar Pradesh and Bihar. Construction works, rickshaw pulling and other menial works are monopolised by labourers coming from eastern Uttar Pradesh and Bihar. In 1961, highest number (25000) of seasonal migrants in the State were enumerated in this district.³⁶

Though, the conditions prevailing in Nainital Hills are similar to those in hilly districts of Almora and

³⁶ Census of India 1961, Uttar Pradesh, Part I-A (i), General Report.

Pithoragarh, the former has witnessed a continuously high growth of population in comparison to the two entirely hilly districts (Table 2.6). Nainital hills has Nainital town as its main settlement, which besides, being a famous hill station and tourist centre was also the summer capital of the Government of United Provinces in British period. Being headquarters of Kumaon Division and the district Nainital, Nainital town accommodates a large number of offices. It has been a centre of education of Kumaon region since long having a large number of Government and private educational institutions and, presently, is the seat of Kumaon University. Establishment of sanitorium at Bhowali, State Farm at Jeolikote, Veterinary Research Institute at Mukteshwar have added to the growth of population. Establishment of ten Scheduled Caste colonies by the Government³⁷ in the area also added to the growth of population further. As noted earlier, a large number of Nepalese have settled in the area and a good number are attracted every year for the job of porters. Horticulture and potato cultivation has flourished well

³⁷ Tchsil wa Zila Nainital Ki Settlement Report 1963-64 (in Hindi), Board of Revenue, U.P.

in the area, which also provide good employment opportunity to outside labourers and contractors. Introduction of road transport has created number of roadside catering centres.

2.2.2 Components of Population Growth

Births, deaths and migration are the three components of population growth. Interaction of these three changes the size and composition of the population of a country or a region. Difference between births and deaths represents the "Natural Increase or Decrease" in population. Net migration, being the difference between in-migration and out-migration is the other component of population growth.

2.2.2.1 Birth and Death Rates : Primary source of birth and death statistics is the registration data. The system of registration is prevalent in the country since long. Unfortunately, the system has been found defective due to high degree of under-registration. It is difficult to know the extent of their inaccuracy, which can only be guessed.³⁸

³⁸ Proceedings of Third All India Sanitary Conference held at Lucknow 1914. The contention was put forth by the delegates representing Government of India.

Table 2.7 : Reported Birth and Death Rates in India,
U.P. and Kumaon (1901-11 to 1971-81)

	1901- 11	1911- 21	1921- 31	1931- 41	1941- 51	1951- 61	1961- 71	1971- 81
India	BR 37.0	37.0	33.0	34.2	27.5	27.0	N.A.	N.A.
	DR 33.0	34.3	25.6	23.3	19.7	13.0	N.A.	N.A.
	RNI 4.0	2.7	7.4	10.9	7.8	14.0		
U.P.	BR 41.7	42.9	34.0	34.2	24.8	15.9	12.8	5.7
	DR 39.5	40.8	25.6	21.9	16.5	9.2	6.4	1.9
	RNI 2.2	2.1	8.4	12.3	8.3	6.7	6.4	3.8
Kumaon	BR N.A.	36.4	35.1	31.1	29.1	18.3	14.3	6.8
	DR N.A.	36.7	28.6	23.2	17.5	9.1	6.4	2.0
	RNI (-) 0.3	6.5	7.9	11.6	9.2	7.9	4.8	
Almora	BR N.A.	40.1	38.2	39.7	33.2	20.4	16.1	8.0
	DR N.A.	31.9	26.1	21.2	18.3	11.1	8.2	2.7
	RNI	8.2	12.1	18.5	14.9	9.3	7.9	5.3
Pithora- garh	BR N.A.	40.1	38.2	39.7	33.2	20.4	18.1	4.6
	DR N.A.	31.9	26.1	21.2	18.3	11.1	7.9	2.0
	RNI	8.2	12.1	18.5	14.9	9.3	10.2	2.6
Nainital	BR N.A.	28.0	29.0	29.5	19.2	13.7	10.8	7.0
	DR N.A.	42.3	36.0	27.8	15.7	5.5	3.8	1.6
	RNI (-) 14.3	(-) 7.0	1.7	3.5	8.2	7.0	5.4	

Note : BR = Birth Rate; DR = Death Rate; and RNI = Rate of Natural Increase

Source: i. Kingsley Davis, Population of India and Pakistan, 1951.

ii. Census of India 1961, Vol.XV, Part I-B, Report on Vital Statistics.

iii. Census of India, 1911 & 1921, U.P. General Reports.

iv. Census of India 1952, Vol.II, Part I-B, U.P. Subsidiary Tables.

v. Registrar General of India, Annual Bulletins of Vital Statistics in India.

In Uttar Pradesh the extent of under registration was found to the tune of 61 per cent during 1951-60.³⁹ Nevertheless, these statistics can be used for certain purposes and it does not pay to dismiss them entirely.⁴⁰ They reveal broad trends in birth and death rates, rural urban differentials and prospects for decline etc. Deficiency of registration has led to recourse to estimation. These estimates are prepared by Census actuaries on the basis of Census data and this forms the secondary source of information. Since 1968, sample Registration Scheme is also providing information regarding birth and death rates.

Data regarding birth and death rate from these sources are given in Table 2.7 and Table 2.8. Comparison of these two sets of data suggest that position of registration has been fairly well upto 1911-20, particularly, in U.P. Deterioration in quality of registration after that may be attributed to the reduction in number of village chowkidars under economy measures.⁴¹ From the

³⁹ Census of India 1961, Vol.XV, U.P., Part I-B, op. cit, Table 4,12, p.41.

⁴⁰ Davis, Kingsley, op. cit, pp.67-68.

⁴¹ Census of India, 1961, Vol.XV, op. cit, p.9.

Table 2.8 : Estimated and Corrected Birth and Death Rates in India, U.P. and Kumaon (1901-11 to 1971-81)

		1901-11	1911-21	1921-31	1931-41	1941-51	1951-61	1961-71	1971-81
India	BR	49.2	48.1	46.4	45.2	39.9	41.7	39.0	34.5
	DR	42.6	48.6	36.3	31.2	27.4	22.8	17.0	14.7
	RNI	6.6	(-) 0.5	10.1	14.0	12.5	18.9	22.0	22.1
U.P.	BR	41.7	44.0	42.2	47.0	38.6	41.5	42.5	41.0
	DR	42.7	47.1	33.5	26.1	27.2	24.9	24.2	20.0
	RNI	(-) 1.0	(-) 3.1	8.7	20.9	11.4	16.6	18.3	21.0
Kumaon	BR	-	37.5	43.3	43.9	42.9	43.9	44.0	42.1
	DR	-	43.0	36.5	27.4	28.2	24.8	24.2	20.1
	RNI	-	(-) 5.5	6.8	16.5	14.7	19.1	19.8	22.0
Almora	BR	-	41.5	46.4	52.5	47.0	46.0	45.8	43.3
	DR	-	38.2	34.0	25.4	29.0	26.8	26.0	20.8
	RNI	-	3.0	12.4	27.1	18.0	20.0	19.8	19.5
Pithora-garh	BR	-	41.5	46.4	52.5	47.0	46.0	47.8	39.9
	DR	-	38.2	34.0	25.4	29.0	26.8	25.7	20.1
	RNI	-	3.0	12.4	27.1	18.0	20.0	22.1	19.8
Nainital	BR	-	29.1	43.1	42.3	33.0	39.3	40.5	42.3
	DR	-	46.6	43.9	32.0	26.4	21.2	21.6	19.7
	RNI	-	(-) 19.5	(-) 0.8	10.3	6.6	18.1	18.9	22.6

Note : BR = Birth Rate; DR = Death Rate; and RNI = Rate of Natural Increase.

Source :

- i. Kingsley Davis, The Population of India and Pakistan, Princeton, 1951 for 1901-41.
- ii. Census of India 1951, Paper No.6, 1954 for 1941-51.
- iii. Registrar General of India, Sample Registration Bulletins for 1961-81.
- iv. Census Acturial Report for 1951-61.
- v. Computed for U.P. by Reverse Survival Method from 1971 Census figure for 1961-71 by SS Khanka.
- vi. Registration figures for Kumaon and its district are corrected by the difference of reported and estimated figures for U.P.

decade 1941-51 onwards deterioration is very sharp and goes on increasing decade after decade. Statutory obligation of reporting births and deaths under Panchayat Raj Act 1947, on the part of head of the household does not seem to have worked and the gap in registration is now far more than before. However, registration figures of births and deaths are available upto district level. But the estimation and SRS figures are confined upto State level only. Analysis based upon birth and death rates at regional and district levels suffer for the want of appropriate data.

To bridge this gap, we have prepared estimates of birth and death rate for Kumaon region by correcting registration rates of the region and its districts with a view to assessing the rates of migration from the region. We have assumed that the differential trends of births and deaths in U.P. and Kumaon are reflected well in registration data; and degree of under-registration is the same in Kumaon and U.P. Registration rates of the region and its districts are corrected using the ratio of reported to estimated rates in the State. Figures are given in Table 2.8 with estimated birth and death rates of India and U.P.

Table 2.9 : Rate of Natural Increase and Population Growth in the Districts of Kumaon 1911-1981

Decades	Almora		Pithoragarh		Nainital	
	R.N.I.	R.P.G.	R.N.I.	R.P.G.	R.N.I.	R.P.G.
1911-21	3.0	0.97	-	-	(-) 19.5	(-) 14.42
1921-31	12.4	9.99	-	-	(-) 0.8	0.15
1931-41	27.1	17.82	-	-	10.3	5.26
1941-51	18.0	12.45	-	-	6.6	14.92
1951-61	20.0	16.05	-	-	18.1	71.23
1961-71	19.8	17.32	22.1	20.64	18.9	37.57
1971-81	19.5	16.77	19.8	17.84	22.6	43.85

Note : i. R.N.I. = Rate of Natural Increase; and
R.P.G. = Rate of Population Growth

ii. Since district Pithoragarh was a part of Almora till 1961 Census figures of births and deaths are included in the figures of Almora, R.P.G. is also combined for these districts till 1961.

Source : Computed from Census population and figure of Table 2.5.

Comparison of the rate of natural increase deduced from our data with rate of population growth in the districts over decades suggests the adequacy and fairness of birth and death rates so calculated. Comparative picture of rate of natural increase and population growth overtime presented in Table 2.9 support each other.

It is seen that the hill districts of Uttar Pradesh suffered considerable net loss of their population in every Census. Almora ranks first among such districts not only in hill region but among all the districts in the State. District Pithoragarh does not lag much behind in this respect. Contrary to this, district Nainital stands on the top of those districts in the State which are net grainers. While Almora lost to rest of U.P. net population of about 29, 39, 44, 86 and 71 thousands in the Censuses of 1901, 1911, 1921, 1961 and 1971 respectively and Pithoragarh lost to rest of U.P. 6 and 21 thousands in 1961 and 1971 respectively. Nainital gained the net population of 121, 112, 93, 142 and 154 thousands respectively from rest of U.P. in these Censuses.

Now we turn to behaviour of birth and death rates and their contribution to population growth in India, U.P. and Kumaon.

In a country like India, where migration to and from outside the country is nominal natural increase plays the major role in the growth of population. Prior to 1921, high death rates and high birth rates characterised the demographic situation. It is generally observed that high birth rate follow the high death rate so that the balance of population of high death rate community could be maintained in order to keep it in existence.⁴² But after 1921, there has been a gradual decline in death rate as a result of the control over epidemic diseases, introduction of massive health programmes, improvement in drinking water facilities, use of antibiotics, development of a more effective food distribution system and avoidance of famine catastrophes, leading to a significant decline in death rate.⁴³ In the

⁴² Coal, Ansley and Hoover, Edger, M. (1958) : Population Growth and Economic Development in Low Income Countries, Princeton.

⁴³ Padmanabh, P. (1982) : "Mortality in India : A Note on Trends and Implications", Economic and Political Weekly, Vol. XVIII, No. 32, August 7, p. 1285.

face of rapidly declining death rate, birth rates maintained a very slow pace towards decline. Consequently, a higher rate of natural increase phenomenally boosted up the population growth. A noticeable decline in birth rate has started mainly after 1951, it has come down to 34.⁴⁴ But the gap between birth and death rates continued to widen.

In U.P., birth rates have been playing a strange game of 'see-saw' keeping the over-all trend almost constant. Thus as compared to 42 per thousand in 1901-11, birth per thousand were estimated to be 41 in 1971-81. They have never gone below this except in 1941-51. But death rates has assumed a definite trends towards decline, although, not as sharp as in India. It seems that economic change and alteration in mode of living sufficient to affect fertility and mortality has not yet taken place in an agrarian⁴⁵ society of Uttar Pradesh.

⁴⁴ Agrawala expected birth rate to come down to 35 per thousand by 1971-81 as a result of widespread use of contraceptives. Agrawala, S.N. (1960) : "Some Projections of India's Population", India's Population: Some Problems in Perspective Planning, ed. Agrawala, S.N., Asia, p.19.

⁴⁵ Census of India, 1961, Vol.XV, U.P., Op. cit, p.12.

Corrected birth and death rates in Kumaon have displayed the same behaviour as in U.P. Both the rates are higher in Kumaon than in U.P. They reflect relatively high incidence of poverty and greater degree of agrarian predominance in the economy, particularly, in the hilly districts of Almora and Pithoragarh. Birth rates in Almora and Pithoragarh are comparatively higher than Nainital but they have a definite trend towards decline. Death rates were higher in Nainital prior to 1931-41 due to high incidence of epidemics and malaria but after that period, they are lower than in Almora and Pithoragarh, mainly, because of slow expansion of medical and health facilities and lower level of knowledge about health and hygiene, in spite of more salubrious climate, in latter districts. Death rates are declining in all the districts but the rate of decline is remarkably sharper in Nainital.

2.2.2.2 Migration : Except a few inward streams in post-independence period due to political reason from Pakistan and Bangladesh, India has not witnessed any large scale migration to and from, at least, in the present century.

Percentage of the persons born out-side India was 8.7 million and 10 million in 1951 and 1961 respectively, which

accounts only 2.4 per cent in each decade.⁴⁶ Migration has played a very insignificant role, particularly, in pre-Independence period. Its role in growth of population in post-Independence period is attributable to influx of refugees from Pakistan and Bangladesh. However, the volume of migration within the country has been very large.

U.P. has been one of the States losing a major part of its population by migration in the decades before independence, as is indicated by lower rate of Natural increase as against the rate of population growth. According to Bhattacharjee,⁴⁷ during 1901-61, U.P. has undergone a net loss of 1.5 million persons with nearly 2.6 million emigrants and nearly 1.1 million in-migrants. This tendency has not ceased to operate even after 1961 as advance one per cent data of 1971 Census reveals that in 1971, net all time loss by migration was 2.4 per cent with 4 per cent out-migrants and 1.6 per cent in-migrants.

⁴⁶ Saxena, G.B (1971) : Indian Population in Transition, Delhi, p.132.

⁴⁷ Bhattacharjee, P.J & Shastri, G.N. (1976) : Population in India (A Study of Inter-State Variation), New Delhi, p.41.

Kumaon has been losing its population by out-migration upto 1941, as is indicated by exceeding rate of natural increase over growth rate of population. But after 1941, it has turned a gainer because of rehabilitation programme in tarai, eradication of malaria and control of other diseases and rapid economic expansion due to developmental works in Nainital district. As noted earlier, Almora and Pithoragarh districts have been a constant loser of population every decade. During the decades 1951-61 and 1961-71, the proportion of net inter-district out-migrants in total population was 13.5 and 9.4 per cent respectively from Almora and 2.3 and 6.6 per cent from Pithoragarh. In contrast to this, Nainital has been a constant gainer of population through in-migration. During the decades referred above, Nainital gained 25 and 19 per cent of its population by inter-district net in-migration only. The common belief about Kumaon as a region with high out-migration does not seem true for region as a whole but for its hilly parts only. Thus, migration has contributed a great deal in the growth of population in Nainital district, at the same time, it has imposed checks on the higher growth of population in Almora and Pithoragarh districts.

2.2.3 Density of Population

Kumaon having in possession of 7.1 per cent area of Uttar Pradesh accommodates only 2.1 per cent of its population.⁴⁸ Density of population in Kumaon has always been lower than the State and the country as a whole. As evidenced from the figures in Table 2.10 it was 37 in Kumaon in 1901 as against 162 and 72 in U.P. and India respectively. In 1981, it has grown to 113 in Kumaon, 377 in U.P. and 216 in India. But the overall growth is highest in Kumaon (205.4 per cent) as against U.P. (132.7) and India (200 per cent). In the districts density of population varies between 55 (Pithoragarh) and 167 (Nainital). It is interesting to note that district Nainital (167) has taken the lead over Almora (141) in 1981 which has constantly maintained the lead throughout upto 1971. This can be ascribed to continuous immigration and decline in mortality in Nainital district. Overall increase in Pithoragarh (293 per cent) is highest followed by Nainital (263 per cent). Nainital hills has surpassed all the areas by achieving the overall growth of 315 per cent. This unevenness of distribution over areas can be

⁴⁸Census of India 1981, Part II-B, U.P., op. cit.

Table 2.10 : Density of Population in Kumaon,
U.P. and India (1901-81)

Census Year	Almora	Pitho- ragarh	Naini- tal	Naini- tal hills	Kumaon	U.P.	India
1901	64	14	46	58	37	162	72
1911	72	16	48	76	40	163	77
1921	62	22	41	81	38	158	77
1931	68	25	41	39	41	168	85
1941	NA	NA	43	NA	46	191	98
1951	93	32	49	127	53	214	111
1961	103	39	35	153	70	250	134
1971	120	47	116	196	88	300	173
1981	141	55	167	241	113	377	216
Percentage growth (1901-81)	120.3	292.8	263.0	315.5	205.4	132.7	200.0

Note : i. NA denotes not available.

ii. Figures of Pithoragarh and Champawat tehsils; and Almora and Ranikhet tehsils are used to calculate the densities of Pithoragarh and Almora districts respectively. Tehsil-wise tabulation was not done in 1941.

iii. Area figures of 1981 Census are used for all Census years in case of U.P. and Kumaon region.

Source : i. Census Reports of respective Censuses.

ii. Statistical Diary, U.P., 1983, Economics and Statistics Division, State Planning Institute, U.P.

attributed to physical environment including altitude, slope, aspect, climate, vegetation, availability of water etc. interacting with social factors.⁴⁹ Moreover, high out-migration from Almora and Pithoragarh has a significant contribution in keeping the density low there.

Kumaon covers a larger area in comparison to its population but what proportion of this area is economically and geographically useable for human support is of prime importance. Agriculture being mainstay of the population, even more than that of U.P. and India, and expansion of agriculture being highly constrained by geographical and other factors, the appropriate method of measuring the pressure of population on the land would be agricultural land based rather than the total geographical area.

Kingsley Davis has also advocated this method for mainly agrarian countries like India.⁵⁰ According to one estimate made on the basis of projected population for the year 1977 agricultural land based density of population comes to be more than 400 persons per sq. km. in Himalayan region.⁵¹

⁴⁹ Kumar, K. op. cit. pp.119-124.

⁵⁰ Davis, Kingsley, op. cit. pp.18-22.

⁵¹ Gupta, P.N. (1981) : Uttar Pradesh Ke Himalaya Wa Shivalik Kshetra Ki Samashya Wa Upchar Par Ek Bihangam Dristi (in Hindi); Science and Rural Development in Mountains. (eds.) J.S. Singh, S.P. Singh, C. Shastri, Nainital p.263.

Table 2.11 : Density of Population based on Agricultural Land for some Years in U.P. and Kumaon

	1975-76	1976-77	1980-81
Almora	628	619	625
Pithoragarh	628	619	604
Nainital	439	447	532
Nainital Hills	NA	NA	550
Kumaon	531	533	573
Uttar Pradesh	521	530	580

Note : i. NA denotes not available.

ii. Density for the years 1975-76 and 1976-77 is calculated on the projected population. Actual population figures for 1981 were Available.

Source: i. Uttar Pradesh Ke Parbatiya Kshestron Main Krish Utpadan (1973-74 Se 1978-79), 1981, Directorate of Agriculture, U.P.

ii. Zila Shankhyaki Patrika, Almora, Nainital and Pithoragarh, 1982.

iii. Shankhyaki Diary, U.P., 1983, Economics and Statistics Division, State Planning Institute, U.P.

iv. Inter-regional and inter-district variations in levels and growth of income in Uttar Pradesh (1968-69 to 1976-77), Giri Institute of Development Studies, Lucknow.

v. Census of India 1981, Part II-B, U.P., Primary Census Abstract.

Agricultural density of population for some years calculated on the basis of projected and actual population of 1981 for Kumaon and U.P., is presented in Table 2.11. In the years 1975-76 and 1976-77, agricultural density in Kumaon is higher than U.P., but U.P. figures are slightly higher than Kumaon in 1980-81. Highest Agricultural density is observed in Almora district followed by Pithoragarh in all the three years. Average of Nainital district is quite low in comparison to Kumaon and U.P. and further low in comparison to Almora and Pithoragarh districts. Density of Nainital hills is much higher than the district as a whole but lower than the average of the region. By and large, the pressure of population on land is higher in the hills than in the plains. If we exclude the cultivation on the lands above 30 per cent slope, the density will go up by three times in the hill areas. About two third of agricultural land in hills lies above 30 per cent slope, cultivation on which is strictly prohibitive.⁵² These evidences clearly indicate that Kumaon hills are economically over populated.⁵³ If

⁵²Ibid.

⁵³Kumar, K, op. cit, p.119.

density of population in U.P. is regarded to have reached the saturation point,⁵⁴ it has crossed this point in Kumaon region.

2.2.4 Age Composition of the Population in Kumaon and U.P.

The age composition of a population is a product of the birth, age specific death rates and migration rates that have operated over a period of three to four generations.⁵⁵ Studying the population of the world of mid-twentieth century, Hawley has identified two types of population. Firstly, the population with two-fifth or more of their members under fifteen years of age, over one half in the ages fifteen to sixty four years and negligible proportion in sixty five and above, are characterised by high levels of birth and death rates. Secondly, the populations with one-fifth of their total in the youngest age group, two-thirds or more between ages fifteen to sixty four and seven per cent or more in the oldest age group are distinguished by low level

⁵⁴ Census of India 1971, Portraits of Population, Uttar Pradesh.

⁵⁵ Hawley, A.H. (1959) : Population Composition in the Study of Population, (ed.) Hauser and Duncan, The University of Chicago Press, p.364.

of birth and death rates.⁵⁶ According to this classification, India belongs to former group characterised by broad based pyramid rapidly tapering with age. More or less, the same condition is prevailing in all the developing countries of the world.

Age composition in U.P. and Kumaon follows the pattern of India. Table 2.12 indicates that more than 40 per cent of the population consists of the lowest age group (0-14 years), more than 50 per cent the middle age group (15-59) and a small proportion of the oldest age group (60 and above) both in U.P. and Kumaon in 1971. The same trend prevails in all the districts of Kumaon in 1971, Nainital being exception upto 1961. Persistant high birth rate and upto some extent declining mortality, particularly infant mortality, may be responsible for this phenomenon.⁵⁷ Looking back at the preceding decades, we find a constant trend towards rise with minor fluctuations at one or two points in population under fifteen

⁵⁶ Ibid.

⁵⁷ Coale, A.J., "Effects of Declines in Mortality on Age Distribution", Trends and Differentials in Mortality, Proceedings of a Round Table at the 1955 Annual Conference, Milbank Memorial Fund, pp.126-132; and Saxena, G.B., op. cit, p.74.

Table 2.12 : Percentage Distribution of Population
by Age and Sex in Kumaon and U.P.
1901-71

Census Year	Age Group 0-14					Age Group 15-39				
	Almora	Pithoragarh	Nainital	Kumaon	U.P.	Almora	Pithoragarh	Nainital	Kumaon	U.P.
1901 P	38.7	38.7	33.2	36.5	37.2	39.7	39.7	47.1	42.7	40.0
M	50.8	50.8	55.6	52.1	52.5	51.1	51.1	53.4	53.5	51.8
F	42.9	42.9	44.4	47.9	47.5	48.9	48.9	46.6	46.5	48.2
1911 P	39.5	39.5	34.0	37.3	36.7	38.6	38.6	45.5	41.3	40.7
M	51.0	51.0	53.2	51.6	52.8	49.7	49.7	59.2	53.7	52.3
F	49.0	49.0	46.8	48.4	47.2	50.3	50.3	40.8	46.3	47.7
1921 P	39.1	39.1	32.7	37.0	37.4	38.1	38.1	46.5	40.9	39.7
M	51.2	51.2	53.8	52.0	52.9	47.5	47.5	60.9	52.7	52.4
F	48.8	48.8	46.2	48.0	47.1	52.5	52.5	39.1	47.3	47.6
1931 P	39.1	39.1	32.8	37.1	38.9	40.0	40.0	50.0	43.4	41.4
M	50.9	50.9	53.8	51.7	52.3	47.4	47.4	61.1	52.8	52.7
F	49.1	49.1	46.2	48.3	47.7	52.6	52.6	38.9	47.2	47.3
1941 P)										
M)										
F)										
	NOT AVAILABLE									
1951 P	39.7	39.7	35.3	38.4	37.9	37.0	37.0	44.0	39.0	37.5
M	52.3	52.3	53.1	52.5	52.4	44.6	44.6	60.3	49.8	52.7
F	47.7	47.7	46.9	47.5	47.6	55.4	55.4	39.7	50.2	47.3
1961 P	40.9	41.6	38.4	40.0	40.4	35.9	36.2	42.3	38.4	37.2
M	51.0	50.9	52.7	51.6	52.7	43.2	44.8	61.3	51.2	51.8
F	49.0	49.1	47.3	48.4	47.3	56.8	55.2	38.7	48.8	48.2
1971 P	42.3	42.0	42.3	42.1	41.8	34.7	36.1	38.2	36.5	35.5
M	50.8	51.5	52.8	51.6	53.8	43.7	45.1	56.2	49.6	51.9
F	49.2	48.9	46.8	48.4	46.2	56.3	54.9	43.8	50.4	48.1

Contd.../-

Census Year	Age Group 40-59						Age Group 60+					
	Almora	Pithora-garh	Nainital	Kumaon	U.P.		Almora	Pithora-garh	Nainital	Kumaon	U.P.	
1901 P	16.0	16.0	16.0	16.0	17.4		5.6	5.6	3.7	4.8	5.5	
M	50.0	50.0	55.1	53.4	50.6		50.0	50.0	47.8	49.9	45.2	
F	50.0	50.0	44.9	46.6	49.4		50.0	50.0	52.2	50.1	53.8	
1911 P	16.3	16.3	16.6	16.6	17.3		5.6	5.6	3.8	4.8	5.3	
M	52.3	52.3	56.4	53.9	51.8		51.7	51.7	50.0	51.2	48.0	
F	47.7	47.7	43.6	46.1	48.2		48.3	48.3	50.0	48.8	52.0	
1921 P	16.8	16.8	17.1	16.9	17.5		5.9	5.9	3.7	5.2	5.4	
M	51.7	51.7	59.6	54.4	51.8		53.1	53.1	53.6	52.4	48.0	
F	48.3	48.3	40.4	45.6	48.2		46.9	46.9	46.4	47.6	52.0	
1931 P	16.1	16.1	14.5	15.6	15.7		4.8	4.8	2.7	3.9	4.0	
M	53.2	53.2	60.0	55.2	52.6		55.6	55.6	57.1	55.9	50.0	
F	46.8	46.8	40.0	44.8	47.4		44.4	44.4	42.9	44.1	50.0	
1941 P)												
M)	NOT AVAILABLE											
F)												
1951 P	17.8	17.8	17.2	17.6	19.3		5.5	5.5	3.4	5.0	5.2	
M	54.3	54.3	63.6	56.9	49.9		55.8	55.8	54.4	55.5	50.7	
F	45.7	45.7	36.4	43.1	50.1		44.2	44.2	45.5	44.5	49.3	
1961 P	16.7	15.7	14.8	15.8	16.0		6.4	6.5	4.5	5.8	6.8	
M	49.0	50.0	52.7	54.5	53.8		53.6	52.9	57.7	54.8	52.2	
F	51.0	50.0	47.3	45.5	46.2		46.4	47.1	42.3	45.2	47.8	
1971 P	15.9	15.1	14.3	15.2	15.9		7.1	6.8	5.2	6.2	6.8	
M	48.7	50.1	60.5	53.7	52.6		52.8	52.4	60.9	55.6	54.5	
F	51.3	49.9	39.5	46.3	47.4		47.2	47.6	39.1	44.4	45.5	

Note : 1. Age Tables of 1941 Census were not prepared due to the economy measures taken on account of war.

ii. Since Pithoragarh district formed a part of Almora district upto the Census decade 1951-61, age tables for Almora and Pithoragarh are the same upto 1951, hence the figures are identical upto this Census year.

iii. Age tables of 1951 Census are based on sample population.

Source : Census of India, 1901, 11, 21, 31, 51, 61 and 71, Age Tables.

years of age in U.P. and Kumaon both. Reverse trends in 1911 and 1951 in U.P. (Table 2.12), may be explained by heavy net out-migration (5 lakhs) from the State during the decade 1901-11 and transfer of population from the plains part of the State during the decade 1941-51 due to partition of the country respectively; and contrasting high increase in Kumaon may be explained by the influx of refugees from Pakistan. In subsequent decades, the increase of population under this group is steady in all areas. District Nainital witnessed the highest increase from 33 per cent in 1901 to 42 per cent in 1971 equalising Almora with 42 in 1971 from 39 in 1901. In the same way, the percentage of population in the age group 60 and above has increased over eight decades from 4 per cent to 6 per cent in Kumaon and from 5 per cent to 7 per cent in U.P. This increase may be accounted by a decline in mortality over the decades. Consequently, the percentage of economically active population (age group 15-59) has decreased considerably in U.P. and Kumaon both. Percentage decrease over the decades is 52 from 59 in Kumaon and 51 from 57 in U.P. The highest decrease from 63 to 52 per cent is witnessed in district Nainital and the lowest in Almora and Pithoragarh from 56 to 51 per cent. A constantly lower percentage of population over decades in 15-59 years of age group (Table 2.13) in Almora and Pithoragarh districts and constantly

Table 2.13 : Percentage Distribution of Population in
Dependant and Productive Age Groups
1901 -71

District/Region	1901	1911	1921	1931	1951	1961	1971
Almora							
0-14 & 60+	44.3	45.1	45.0	43.9	45.2	47.3	49.4
15 - 59	55.7	54.9	55.0	56.1	54.8	52.6	50.6
Pithoragarh							
0-14 & 60+	44.3	45.1	45.0	43.9	45.2	48.1	48.8
15 - 59	55.7	54.9	55.0	56.1	54.8	51.9	51.2
Nainital							
0-14 & 60+	36.9	37.8	36.4	35.5	38.7	42.9	47.5
15 - 59	63.1	62.1	63.6	64.5	61.2	57.1	52.5
Kumaon							
0-14 & 60+	40.2	42.1	42.2	41.0	43.4	45.8	47.3
15 - 59	58.7	57.9	57.8	59.0	56.6	54.2	51.7
Uttar Pradesh							
0-14 & 60+	42.7	42.0	42.8	42.9	43.1	46.8	48.6
15 - 59	57.4	58.0	57.2	57.1	56.8	53.2	51.4

Source : Census of India, Age Tables of Respective Censuses.

high percentage of population in this age group, in district Nainital suggests that migration has also influenced the age composition in Kumaon to a large extent.⁵⁸

A look at the figures of male and female population in the age group of 0-15 years in all the decades, does not indicate the predominance of female population over male population which might have affected the proportion of male and female population in the coming decades in the next higher age groups. Abnormally high percentage of males over females is also not noticeable in any decade in this age group. But in age group 15-39, percentage of females over males has increased from the decade 1901-11 in Almora and Pithoragarh districts. Percentage of females 50.3 in 1911 has gone upto 56.3 in 1971 in Almora and from 50.3 to 55 per cent in Pithoragarh. In the absence of female selective immigration and male selective high mortality in this age group, it is clear that the male selective outmigration from the districts of Almora and Pithoragarh accounts for this phenomenon. Case of district Nainital is at variance with that of Almora and Pithoragarh. Proportion of males and females in the age group 0-15 in

⁵⁸ Kumar, Kamlesh, op. cit., p.126.

Nainital is similar to that of Almora and Pithoragarh in some decades and slightly higher percentage of males in others. But the proportion of males in the age groups 15-39 and 40-60 is abnormally high in almost all the decades following 1901-11 in the district. As we have already noted that it is due to the seasonal and permanent male selective in-migration in the district. From the decade 1951-61 the number of female has surpassed the number of males in the age group 40-59 also in Almora and Pithoragarh districts. They may be attributed to comparatively stable jobs and good remunerations which retain migrants at the place of destination beyond the age of 40 years.

2.2.5 Sex-Composition in Kumaon and U.P.

Sex ratio in Kumaon is constantly lower than both U.P. and India upto 1941 and lower than India upto 1961 (Table 2.14). A relatively low sex ratio in district Nainital due to a large number of male in-migration, is responsible for comparatively lower sex ratio in Kumaon region as a whole. When we look at the figures of district Almora and Pithoragarh, we find that the sex ratio in these districts is constantly higher than U.P. and India since 1901, and constantly adverse i.e., in favour of female since

Table 2.14 : Sex Ratio in Kumaon, U.P. and India:
1901-81

Census Year	Almora	Pitho- ragarh	Naini- tal	Naini- tal hills	Kumaon Region	U.P.	India
1901	975	947	799	739	896	937	972
1911	964	988	769	627	888	915	964
1921	998	986	722	694	894	909	956
1931	998	997	708	724	894	904	951
1941	1009	1009	704	NA	907	907	946
1951	1046	1016	715	790	926	910	947
1961	1091	1043	718	844	918	909	941
1971	1088	1026	797	874	941	879	930
1981	1081	1014	840	876	946	885	935

Note : i. NA denotes not available.

ii. Due to non-availability of tehsil figures district figures are used to calculate the sex ratio for the Census of 1941 for Almora and Pithoragarh.

Source : i. Provincial/State Census Reports of Respective Census Years.

ii. Census of India, 1971, Portraits of Population, Uttar Pradesh.

1941. A brief review of the causes underlying the inter-district and inter-regional variations of this magnitude will not be out of place. Sex ratio in Nainital has steadily decreased upto 1941 conforming to that of U.P. and India. High male selective immigration coupled with high incidence of epidemics like plague, influenza and small pox which are supposed to be female selective in their fatal effect,⁵⁹ are greatly responsible for this decrease. After 1941, sex ratio in the districts and region assumes the trend towards increase just contrary to that of U.P. and India, attributable to control of epidemics and improvement in health conditions and large influx of immigrants with families with the objective of settlement in the tarai of district Nainital.

A comparatively high sex ratio in Almora and Pithoragarh districts owes to socio-economic factors and male selective outmigration. From 1901 to 1931, we find that sex ratio in two entirely hilly districts of Almora and Pithoragarh has been just below the unity but remarkably higher than U.P. and India (Table 2.14). Sex ratio becomes greater than one after 1941, mainly, due to male selective out-migration from the districts.

⁵⁹ Kumar, K., op. cit., p.129,

2.2.6 Rural-Urban Distribution of Population

Since urbanisation is both a cause and consequence of economic development, the degree of urbanisation is an important index of general economic progress. In this perspective, Kumaon lags behind U.P. and India both. Share of urban population in India was 23 per cent in comparison 18 per cent in U.P. and 16 per cent in Kumaon, in 1981 (Table 2.15). Urban share of Kumaon's population is mainly the contribution of Nainital district with highest percentage (27.7) of population in urban areas. About 81 per cent of region's urban population resides in this district. Nainital hills with 18 per cent of urban population equals the degree of urbanisation in the State. Almora and Pithoragarh districts are among the least urbanised with a large proportion (94 per cent) of their population being rural.

In comparison to its rural population, urban population all over the country, has increased at a rate four times higher (Table 2.15), during 1901-81. The overall growth during the last nine decades, is astoundly higher in Kumaon region than in the State and country. From 7 per cent in 1901 it has grown to 16 per cent in 1981 registering the overall growth of 660 per cent. Period from decade 1941-51

Table 2.15 : Percentage Distribution of Rural and Urban Population in Kumaon, U.P. and India : 1901-81

	1901	1911	1921	1931	1941	1951	1961	1971	1981	% grow- th 1901- 1981
Almora	R 96.6	95.8	96.4	96.3	N.A.	95.3	95.1	94.8	93.7	110.6
	U 3.4	4.2	3.6	3.7	N.A.	4.7	4.9	5.2	6.3	301.9
Pitho- ragarh	R 100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.2	94.5	278.7
	U -	-	-	-	-	-	-	3.8	5.5	126.2
Nainital Hills	R 87.4	87.3	83.8	82.9	77.1	78.6	80.5	77.9	72.5	202.8
	U 12.6	12.7	16.2	17.1	22.9	21.4	19.5	22.1	27.5	699.8
Mainital Hills	R				N.A.	84.2	84.6	81.2	82.1	
	U				N.A.	15.8	15.4	18.8	17.9	
Kumaon	R 93.4	93.2	93.0	92.9	91.4	91.2	90.5	87.8	83.8	174.9
	U 6.6	6.8	7.0	7.1	8.6	8.8	9.5	12.2	16.2	660.3
U.P.	R 88.9	89.8	89.4	88.8	87.6	86.4	87.1	86.0	82.1	110.6
	U 11.1	10.2	10.6	13.2	12.4	13.6	12.9	14.0	17.9	268.5
India	R 89.2	89.7	88.8	88.0	86.1	82.7	82.0	80.1	77.2	158.1
	U 10.8	10.3	11.2	12.0	13.9	17.3	18.0	19.9	22.8	430.3

Note : i. R = Rural, and U = Urban
 ii. N.A. denote not available
 iii. There was no urban area in Pithoragarh till 1961 Census.
 iv. Figures of 1941 Census for Almora and Tehsil Nainital were not available as Tehsil-wise tabulation was not done in that Census.

Source : i. Census of India, Reports of the Respective Censuses.
 ii. Census of India 1971, Portraits of Population, U.P.
 iii. Statistical Diary, U.P., 1983, Economics and Statistics Division, State Planning Institute, U.P.

and onward has witnessed a remarkably high growth. U.P. with 18 per cent of urban population, in 1981, has witnessed a overall growth of 268 per cent.

In the districts of Kumaon, very high inter-district variation are observed not only in the degree of urbanisation but also in the rate of growth of urban population. During 1901-81, growth of urban population has been about 700 per cent in district Nainital, 302 per cent in Almora and 126 per cent in Pithoragarh.

While the increase in Almora and Pithoragarh is due to the natural increase in their urban population, increase in Nainital district is due to the immigration in its urban areas and emergence of some new towns out of the earlier rural settlements.⁶⁰ In 1981, nine new towns were added in the urban areas of district Nainital, of which four were class six, three class five and two of class four, while in Almora, Dwarahat notified area of class six was the only addition. In Pithoragarh, three town areas and one notified area were created. All of them belonged to class six towns.

⁶⁰ Khanka, S.S., op. cit., pp. 48-49.

Towns and cities may be classed as business and industrial, administrative, educational, tourist, con-tionments and mixed depending upon the purpose of their formation or growth. Towns on hill part of the region are, mostly, the mixture of the latter four classes while the towns of plain parts are mainly business or industrial towns. The growth of latter four types of towns depend upon the expansion of these services, the scope for which is extremely limited in the hills. In the field of economic activities, these towns mostly render the consumption oriented services. This, perhaps, is the reason for the slow growth of urbanisation in Almora and Pithoragarh districts. On the other hand, cities and towns situated in Nainital plain are expanding at a fast pace. Rapid growth in agriculture and allied fields and other sectors of production in tarai and bhabar are providing vast scope for urban growth in the form of expansion of existing and emergence of new towns. In return, these cities and towns, by providing both consumption and production oriented services, are playing the role of growth and service centres to the area. Apart from tourist services, growth of horticulture and potato cultivation has played an important role in the urban growth of Nainital hills.

2.2.7 Literacy

Literacy is an important characteristic of population to the extent it reflects the quality of human resources. In terms of literacy, Kumaon has been on a higher level than India and U.P., since 1951 (Table 2.16). Male literacy in the region is found higher than in the country and the State, but female literacy is lower than in the country and higher than in the State. Rate of growth of male literacy, over decades, was higher in Kumaon than in U.P. and India, but growth of female literacy was lower in the region than in the State and the country. Within Kumaon, Pithoragarh has fared well in comparison to its neighbouring districts. Literacy rates from 1901 to 1971 in terms of effective literacy rates for Kumaon and U.P. are presented in Table 2.17.

Effective literacy rates (ELR), effective male literacy rates (EMLR) and effective female literacy rates (EFLR) are constantly higher in Kumaon than in U.P. right from 1901 to 1971. In spite of the fact that the proportion of literates in total population is higher in Kumaon than in U.P., in all decades under reference, overall growth in U.P. is faster, recording 617 per cent of ELR, 457 per cent of EMLR and 5317 per cent of EFLR while in Kumaon these rates stand at 553, 421 and 3374 respectively at the close of 1961-71 decade.

Table 2.16 : Percentage of Literates in India,
U.P. and Kumaon (1951-81)

	P	Censuses				Percentage increase in literacy
		1951	1961	1971	1981	
Almora	P	16.8	21.4	28.8	37.8	125.0
	M	30.3	38.5	46.3	56.7	87.1
	F	3.6	5.6	12.7	20.3	463.9
Pithoragarh	P	15.8	23.5	30.3	39.1	147.5
	M	29.4	41.7	48.2	58.1	97.6
	F	1.9	5.8	12.9	20.3	968.4
Nainital	P	21.7	27.4	31.9	37.8	74.2
	M	30.3	36.7	41.3	46.8	54.4
	F	9.4	14.4	20.2	27.1	188.3
Kumaon	P	18.0	24.6	30.4	38.0	111.1
	M	30.2	38.8	44.4	52.0	72.2
	F	4.6	9.3	15.4	23.3	406.5
U.P.	P	10.8	17.7	21.7	26.2	142.6
	M	17.4	27.3	31.5	38.8	123.0
	F	3.6	7.0	10.5	14.0	288.9
India	P	16.7*	24.0	29.5	36.2**	116.8
	M	24.9*	34.4	39.5	46.9**	88.3
	F	7.9*	12.9	18.7	24.8**	213.9

Note : i. P = Persons; M = Males; and F = Females
 ii. * Excludes Jammu and Kashmir
 ** Excludes Jammu and Kashmir, and Assam

Source : i. Census of India 1971, General Population
 Tables.
 ii. Census of India 1981, UP Primary Census
 Abstract.
 iii. Census of India 1981, India, Primary Census
 Abstract.
 iv. District Census handbooks, 1951, 1961 and
 1971 of the respective districts.

In the districts of Kumaon, Almora had been maintaining highest ELR and EMLR but lower EFLR than Nainital upto 1911. In 1921, Nainital gained superiority in general literacy leaving superiority for Almora in male literacy alone. In 1931, district Nainital usurped superiority in all the three rates but could not retain it for long. In the very next decade, it yielded place in male literacy to Almora. This situation continued upto 1951. In 1961, the newly born district of Pithoragarh pushed Almora to third position by the gain of superiority in male literacy but Nainital maintained its position. This continued up to 1971 but by 1981, according to simple literacy rates, Pithoragarh has emerged superior in general and male literacy while Nainital retained superiority in female literacy. Overall growth upto 1971 was faster in Nainital in case of general and male literacy, and in case of female literacy, Pithoragarh was on the top.

Almora being the oldest city, seat of education and culture, has acted as a growth point of the education in the region. This manifests in high degree of literacy, particularly, male literacy in the district during the most parts of the period under reference. As noted earlier, district Nainital attracts a large number of seasonal and permanent male wage labourers from different parts of the

Table 2.17 : Literacy in Kumaon and U.P: ELR,
EMLR & EFLR 1901-71

Census Year		Almora	Pithora-garh	Naini-tal	Kumaon Region	Uttar Pradesh
1901	ELR	6.65	6.65	4.69	5.67	3.55
	EMLR	12.69	12.69	7.87	10.28	6.59
	EFLR	0.34	0.34	0.60	0.47	0.23
1911	ELR	7.59	7.59	6.41	7.00	3.88
	EMLR	14.18	14.18	10.16	12.17	6.87
	EFLR	0.73	0.73	1.36	1.04	0.56
1921	ELR	7.09	7.09	8.29	7.69	4.20
	EMLR	13.45	13.45	12.59	13.02	7.34
	EFLR	0.70	0.70	2.09	1.39	0.69
1931	ELR	8.87	8.87	10.54	9.70	5.49
	EMLR	16.69	16.69	19.89	18.29	9.37
	EFLR	0.96	0.96	2.59	1.77	1.10
1941	ELR	14.62	14.62	16.75	15.68	9.71
	EMLR	26.10	26.10	24.11	25.10	15.82
	EFLR	3.04	3.04	5.92	4.48	2.86
1951	ELR	19.13	19.13	24.87	22.00	12.44
	EMLR	34.86	34.86	34.33	34.59	19.74
	EFLR	3.47	3.47	11.11	7.29	4.17
1961	ELR	25.07	27.46	32.16	28.23	20.73
	EMLR	45.46	49.34	42.17	45.66	31.85
	EFLR	6.49	6.88	13.43	8.93	8.30
1971	ELR	32.95	37.25	37.58	35.92	25.44
	EMLR	54.29	58.41	47.92	53.54	36.69
	EFLR	13.44	17.01	24.18	18.21	12.46
%age growth 1901-71	ELR	395.50	460.10	701.30	533.50	616.60
	EMLR	327.80	360.30	508.90	420.80	456.70
	EFLR	3852.90	4902.90	3930.00	3374.50	5317.40

Note : i. ELR = Effective Literary Rate
 ii. EMLR = Effective Male Literacy Rate
 iii. EFLR = Effective Female Literacy Rate
 iv. Population of Non-school going ages i.e. 0-4 years is excluded from the total population in the calculation of these rates.
 v. Age Tables of 1981 Census were awaited at the time of writing.

Source : Census of India 1971, UP, Series-21, Part I-A,
 General Report.

State and out-side State in its tarai area and commercial towns of plain portion, who are mostly illiterate. This phenomenon reduces the proportion of male literacy in the district. On the contrary, female literacy in the district is high from the very outset. Culturally, the two older towns of Kumaon stand at opposite extremes. While Almora symbolises the old traditional culture, Nainital is the seat of modern culture. Being a popular tourist resort and summer capital of government of United Provinces in the past, the town and its peripheral area came in to contact of British and elite of India. Women among them enjoyed a comparatively higher status than the traditional Indian women. Percolation of this influence in the area is, perhaps, the basic reason of the high female literacy in the district. New district of Pithoragarh born with the Status of a border district, received substantial financial assistance from the Government for the developmental works. As a result, educational institutions and their population multiplied considerably. Besides, a large number of educated persons manned these institutions and new offices from outside the district raising the proportion of literates in the district.

2.2.8 Dependency Ratio

Dependency ratio is defined as number of persons of dependent age per 100 members of productive (15-59) age group or number of non-workers per 100 of workers. Preponderance of children and aged or non-workers in the population reflects a high dependency ratio. Dependency ratio based on dependent and productive age groups as well as workers and non-workers are given in Tables 2.18 and 2.19. Dependency ratio based on productive and dependent age group was lower in Kumaon than in U.P. for all Censuses except 1911 and 1951. But the magnitude of difference is not very high for all the Censuses. A look at the districts reveals that the dependency ratio in predominantly hill parts of Kumaon i.e. in the districts of Almora and Pithoragarh, is higher than that of Kumaon and U.P. both but in Nainital it is much lower than that of Kumaon and U.P. This phenomenon is clearly, an outcome of male selective outmigration from Almora and Pithoragarh and male selective immigration in Nainital. High female participation rates in Almora and Pithoragarh and low female participation rate in Nainital also support this view.

Table 2.18 : Dependency Ratio in Kumaon and U.P.
(1901-81)

Census Years	ALMORA		PITHORAGARH		NAINITAL		KUUAON		U.P.	
	Per 100 workers	Per 100 persons of productive age group	Per 100 workers	Per 100 persons of productive age group	Per 100 workers	Per 100 persons of productive age group	Per 100 workers	Per 100 persons of productive age group	Per 100 workers	Per 100 persons of productive age group
	Per 100 workers	Per 100 persons of productive age group	Per 100 workers	Per 100 persons of productive age group	Per 100 workers	Per 100 persons of productive age group	Per 100 workers	Per 100 persons of productive age group	Per 100 workers	Per 100 persons of productive age group
1901	N.A.	79	N.A.	79	N.A.	58	N.A.	68	N.A.	74
1911	N.A.	82	N.A.	82	N.A.	61	N.A.	73	N.A.	72
1921	N.A.	82	N.A.	82	N.A.	57	N.A.	73	N.A.	75
1931	N.A.	78	N.A.	78	N.A.	55	N.A.	69	N.A.	75
1951	N.A.	82	N.A.	82	N.A.	63	N.A.	77	N.A.	76
1961	68	90	67	93	106	75	81	84	156	88
1971	157	98	149	95	198	90	172	91	223	95
1981	191	N.A.	194	N.A.	209	N.A.	200	N.A.	243	N.A.

Note : i. N.A. denotes not available.

ii. For the Censuses prior to 1961 dependants per 100 workers could not be calculated as the number of actual workers and non-workers were not known. Prior to 1961, Census population used to be classified in livelihood classes on the basis of source of income. From 1961 population is being classified as workers and non-workers on the basis of work which has rendered the comparison difficult. Hence, the analysis based on workers will confine decades 1951-61 and onwards, henceforth.

iii. Age Tables of 1981 were awaited at the time writing.

Source : i. Census of India, UP, Age Tables of respective Census.

ii. Census of India, UP, General Economic Tables 1961 and 1971

iii. Census of India 1991, UP, Primary Census Abstract.

Examining the dependency ratio based on workers and non-workers classification we confront a strange position quite contrary to general belief. Figures of 1961 Census indicate that apart from Kumaon and district Nainital, dependency ratio in the districts of Almora and Pithoragarh are also lower than U.P., and even lower to that of Kumaon and Nainital while they are higher according to dependent and working age group basis. A close scrutiny of both the rates reveal an interesting phenomenon. They point out that the number of persons in working age group are higher than the number of persons in labour force in U.P. but the opposite is true for Kumaon. Within the districts, Nainital has more persons in working age group than in working force but Almora and Pithoragarh have more persons in working force than in working age group. In 1971 also the dependency ratio calculated in both ways continued to be higher in the State than in Kumaon. But age group based ratio in Almora continues to be higher than the State average while Pithoragarh is at par with the State. In a comparative perspective, the trend observed between the two types of ratios in Kumaon and its two districts viz. Almora and Pithoragarh is reversed in 1971 i.e. the number of persons in working age group have superceded the workers. This phenomenon is

Table 2.19 : Composition of Working Force in Kumaon and Uttar Pradesh During 1961 and 1971

	Almora		Pithoragarh		Nainital		Kumaon		U.P.	
	1961	1971	1961	1971	1961	1971	1961	1971	1961	1971
total workers as percentage of population	P	59.3	38.8	59.8	40.1	48.4	33.5	55.1	36.8	39.1
	M	45.0	60.2	45.4	59.5	76.7	89.9	55.9	71.5	77.9
	F	55.0	39.8	54.6	40.5	23.3	10.2	44.1	28.5	22.1
percentage of population in working age groups (15-59)	P	52.6	50.7	51.9	51.2	57.1	52.7	54.2	51.6	51.4
	M	45.1	45.2	46.3	46.9	61.8	57.4	52.2	50.8	52.2
	F	54.9	54.7	53.7	53.1	38.2	42.6	47.8	49.2	52.7
percentage of dependents in working force (0-14)	P	17.4	6.4	10.4	5.7	8.7	4.3	9.7	5.4	4.8
	M	44.9	60.4	44.6	62.3	46.0	89.2	45.3	70.5	77.1
	F	55.1	39.6	55.4	37.7	54.4	10.8	54.7	29.5	88.9
percentage of working age group in working force	P	82.6	93.6	89.5	94.3	91.3	95.7	90.3	94.6	94.0
	M	45.0	60.1	45.6	59.0	83.4	89.9	58.2	71.7	78.1
	F	55.0	39.9	54.4	41.0	16.6	10.1	41.8	28.3	90.0
Combined percentage of women and dependents in working force	P	62.8	49.9	62.3	49.4	31.5	22.4	52.0	38.8	34.6
	M									23.8
	F									10.0

Note : 1 P = Persons; M = Males; and F = Females

Source : Census of India 1961 and 1971, UP, Age and General Economic Tables.

an outcome of definitional change in 1971 rather than any basic change in the composition of the working force. Figures of 1981 Census also confirm that dependency ratio is higher in the State in comparison to Kumaon and its districts.

Percentage of workers in population in Kumaon and its district is much higher than the State both in 1961 and 1971. Percentage of population in the working age groups in Kumaon and the State is almost similar in both the decades. Disparity regarding the proportion of dependents in the working force is wide between Kumaon (10 per cent) and the State (6 per cent), in 1961. Particularly in Almora (17 per cent) and Pithoragarh (10 per cent), percentage of disparity is very high, though this gap is narrowed down in 1971 due to the change in the definition of workers. Percentage of working age group in the working force in 1961 is lower in Kumaon and further lower in purely hilly districts of Almora and Pithoragarh than the State average. This is due to the facts that the private means of transportation like by-cycle not being operative, the students who study in schools and colleges even at a relatively small distance say 10 km. away from their village, temporarily live away from homes in places near to their educational institutions and can not

return home to give their part time contribution to labour force. This is apparent from 1971 figures wherein students, house-wives etc. are kept out of labour force. Consequently, the proportion of working age group in labour force is almost at par in U.P. and Kumaon and its districts. When we combine women and dependents, we find that they constitute the major part of working force in Kumaon (52 per cent) in comparison to U.P. (24 per cent). This proportion is extraordinarily high in Almora (63 per cent) and Pithoragarh (62 per cent) and low in Nainital (31 per cent). These figures are low in 1971 in proportion to reduced working force, keeping its composition in tact.

From this exposition, it emerges that the quantitatively higher labour force in Kumaon having a large women and dependent component, is qualitatively much inferior to that of the State. High percentage of workers in the area reflects the primitive stage of economic activities with low levels of income, productivity and development. High levels of economic development with relatively small size of working force in Nainital confirms above conclusion. Lower proportion of males of working age in labour force indicates high degree of male selective outmigration from Almora and Pithoragarh and vice-versa for Nainital. It also indicate that more workers per unit of work are required in Kumaon (particularly hilly part) than in Uttar Pradesh.

2.2.9 Labour Force Participation Rates in Kumaon,
U.P., and India (1961-81)

As has already been noted in preceding paras that the percentage of workers is higher in Kumaon in comparison to U.P. Female component in labour force is particularly high in the hill part of the region. Participation rate in Kumaon is higher than in U.P. and India throughout the period under reference (Table 2.20). It is mainly because of the high female participation in the region.

Participation rate is reduced to a large extent, in 1971, in comparison to 1961 not only in Kumaon but in India and U.P. also. This sharp decrease is accounted for by the change in the definition of workers, in 1971. Many persons contributing marginally e.g. students and housewives, were excluded from the category of the workers. This largely affected number of the female workers particularly in Kumaon region turning the ratio in favour of males in Almora and Pithoragarh districts. Again, there is a marked change, in 1981, in the rates of participation. Participation rates have increased in general, but the increase is not as sharp as it was in case of decrease in 1971. In 1981, a peculiar feature is noted in the case of U.P. and Kumaon in regard with male participation rate. It has decreased in comparison to 1971 while female participation has increased. This again is attributable to inter-Censal

Table 2.20 : Percentage of Labourforce and Its Distribution by Sex in Kumaon, U.P., and India (1961-81)

		C E N S U S S			Total workers
		1961	1971	1981	
				Main workers	
Almora	Persons	59.2	38.8	31.5	39.7
	Males	55.2	48.5	40.2	43.0
	Females	62.8	29.8	23.2	36.4
Pithoragarh	Persons	59.9	40.1	38.3	46.2
	Males	55.8	48.6	44.9	47.5
	Females	63.7	32.0	31.8	44.8
Nainital	Persons	48.4	33.5	31.7	38.2
	Males	63.8	54.1	51.8	52.4
	Females	26.9	7.7	7.7	11.7
Kumaon	Persons	55.1	36.8	32.1	38.2
	Males	59.2	51.1	47.0	48.6
	Females	50.7	21.6	18.1	27.1
U.P.	Persons	39.1	30.9	29.1	31.8
	Males	58.2	52.5	49.6	51.5
	Females	18.1	6.7	6.0	9.6
India	Persons	43.0	32.9	33.4	37.5
	Males	57.1	52.5	51.2	53.2
	Females	27.9	11.8	14.4	20.8

Note : 1981 figures for India are provisional.

Source : i. Census of India, U.P., General Economic Tables, 1961 and 1971.
 ii. Census of India 1981, U.P. Primary Census Abstract.
 iii. Census of India, 1981, Series - I, India Paper-3 of 1981, Provisional Population Totals workers and non-workers.

change in the definition of workers and creation of a new category of marginal workers, in 1981.

2.3.0 Employment and Unemployment

Occupational structure or employment structure of working force in different sectors has close link with the development of economy. All the economists, generally, agree on the point that the developed economies with high levels of per capita income have a high proportion of working force engaged in industry, trade and commerce while underdeveloped economies with low level of per capita income are characterised by high proportion of working force engaged in agriculture and allied activities. Colin Clark observes that a high average level of income per head is always associated with a high proportion of the working population engaged in secondary and tertiary sectors. As against this, low real income per head is always associated with a high proportion of the working population engaged in primary production.⁶¹ In the course of the development of an economy, it is observed that the employment and investment steadily shifts to secondary sector from primary

⁶¹ Clark, Colin (1957) : The Conditions of Economic Progress, Macmillan (2nd Ed.), London, p. 230.

sector and then tertiary sector from secondary sector.⁶² The countries with greater dependence of population on agriculture and less on industry are found to be proportionately backward in economy.⁶³ Growth of employment opportunities lagging behind the growth of population create unemployment. In the countries where the population has greater dependence on agriculture rather than on commerce and industry, under/disguised unemployment mainly prevails there.

2.3.1 Occupational Structure of Working Force in India, U.P. and Kumaon

According to Census figures presented in Table 2.21 proportion of labour force in primary sector is almost stationary in India though some significant changes taking place within the sector. The proportion of cultivators from 53 per cent has declined to 43 per cent while the proportion of agricultural labourers from 17 per cent has risen to 26 per cent. This change reflects the pressure of increasing population on land rendering small cultivators to the status of landless/landless labourers. The proportion of agricultural workers in 1981 has come down

⁶² Fisher, A.G.B. (1945) : Economic Progress and Social Security, pp.5-6.

⁶³ Kuznet, Simon (1959) : Six Lectures on Economic Growth. The Free Press of Glencoe, Illinois.

Table 2.21 : Occupational Distribution of Population in Kumaon, U.P. and India (1961-71)

	Almora	Pithoragarh	Nainital	Kumaon				U.P.				India			
				1961	1971	1961	1971	1961	1971	1961	1971	1961	1971	1961	1971
I. Primary (Agrl.) Sector															
1. Cultivators	91.1	85.1	88.8	82.8	69.4	68.9	83.2	78.5	75.8	78.1	72.3	72.6			
2. Agricultural labour	89.4	82.4	87.3	80.9	49.6	45.6	75.5	74.8	63.9	57.5	52.8	43.4			
3. Mining, quarrying, livestock, fishery, forestry, hunting plantation, orchards, allied activities	0.6	1.7	0.8	1.2	11.5	18.4	4.4	6.0	11.3	20.0	16.7	26.3			
II. Secondary (Industrial) Sector															
1. Manufacturing Household	2.9	2.4	5.3	3.5	12.1	9.0	6.5	5.1	9.8	7.9	11.7	10.7			
2. Manufacturing Non-household	1.6	1.1	3.5	1.9	5.8	2.0	3.5	1.6	6.2	3.7	10.6	9.5			
3. Construction	0.3	0.8	0.2	0.6	2.8	5.1	1.1	2.4	2.8	3.6					
III. Tertiary (Service) Sector															
1. Trade and Commerce	0.8	12.4	5.9	13.7	18.5	22.1	10.2	16.4	14.5	13.9	16.0	16.7			
2. Transport, Storage & Communication	0.8	1.8	0.8	1.6	3.8	6.3	1.8	3.5	3.7	3.9	4.0	5.6			
3. Other services	0.4	0.7	0.3	0.5	2.2	3.6	1.0	1.8	1.4	1.7	1.6	2.4			
TOTAL (I+II+III)															
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

Sources : 1. Census of India 1961, Series-21, U.P., Part B-III.

ii. Census of India 1971, Series-21, U.P., Part II-B(II), General Economic Tables.

iii. Pocket Book of Population Statistics, 1972.

to 66 per cent⁶⁴ as against 70 per cent in 1971.

Proportion of workers in secondary sector had registered a decline, in 1971 by one percentage point. This may be either due to the replacement of traditional crafts by the capital intensive units requiring less number of workers or due to the slowing down of the pace of industrialisation. Proportion of workers in tertiary sector has shown a slight increase with increasing share of trade, commerce, transport etc. and declining the share of other services.

No significant change has taken place in primary sector in Uttar Pradesh. The proportion of workers in this sector was about 76 per cent in 1961 which has risen to 78 per cent in 1971 (Table 2.21) and again has come down to 74 per cent (Appendix 1), in 1981. In 1971, primary sector in U.P. has expanded in spite of the decrease in the number of the cultivators. It is, perhaps, due to the phenomenal increase in the group of agricultural labourers which absorbed the members not only from the cultivator class but also from the manufacturing household class. Decline of 2 per centage points in household manufacturing class in 1971

⁶⁴Census of India 1981, Series I, India, Part II-B(1), Primary Census Abstract, General Population.

and increase of 2 percentage point in primary sector over 1961, confirms this belief. In 1981, increase (58 percent) in the proportion of cultivators and decline (16 per cent) in that of landless labourers over 1971, shows that the allotment of Gaon Samaj land and surplus land of ceiling to landless and scheduled castes has raised the number of agricultural labourers to the status of cultivators.

Declining trends in secondary as well as tertiary sector are witnessed in U.P. in 1971, in comparison to 1961. Decline in secondary sector is attributed to withering household manufacturing sector while to other services in tertiary sector. In 1981, tertiary sector, non-household manufacturing and construction sub-groups of secondary sector and third subgroup of primary sector have combinedly gained more than 2 percentage point of working force over 1971.

Contrary to that of U.P., proportion of labour force in Kumaon has declined in primary sector in 1971. Proportion of cultivators has decreased marginally but the proportion of agricultural labourers has increased sharply for the same reasons as were operating in U.P. In 1981, proportion of workers in primary sector in Kumaon has declined sharply witnessing the opposite trend to that of U.P. as there was no Gaon Samaj or ceiling surplus land to

to allot^{to} landless class, simultaneously proportion of agricultural labourers has increased contrary to the trend in U.P., but the increase is not in proportion to the decrease in number of cultivators as the small holdings and low productivity of the soil does not allow the absorption of agricultural labourers. Mostly, the family labour and labour in exchange in peak period serve the purpose of agricultural operations. In purely two hilly districts of Kumaon more than 80 per cent of workers were engaged in primary sector i.e. 85 per cent in Almora and 83 per cent in Pithoragarh. Proportion of agricultural labourers is negligible in these districts.

Proportion of secondary sector in Kumaon is much lower than the State and country as a whole (Table 2.21). This sector in Kumaon exists at a very low level of development. This sector has experienced decline in Kumaon and U.P. as well as in the country as^a whole. Country-wide extinction of traditional craft is mainly responsible for this phenomenon. Expansion of non-household manufacturing units at snail's pace is not capable to offset this phenomenon. Secondary sector in purely hilly districts of Almora and Pithoragarh is virtually non-existent. Traditional Bhotia craft of woolen goods and local cane works are taking lost breath due to the dearth of raw material.

Increase in proportion of workers in tertiary sector in Kumaon, is noticeable, though, the proportion of workers in this sector has declined, during 1961-71. All the sub-sectors in this group have shown a growing tendency in Kumaon while the sub-sector 'other services' has witnessed a decrease in U.P. Within Kumaon, all the sub-sectors have shown growing trend. Sub-sector 'other services' has shown a marginal decline in district Nainital, in 1971. Purely hilly districts of Almora and Pithoragarh have witnessed a considerable expansion in this sub-sector, in 1971. Apart from the opening of new Government and semi-Government offices in these districts, proportionately high increase in the number of armed forces in cantonments and other areas may be responsible for this increase.

After agriculture, sub-sector 'other services' is the biggest source of employment in Almora and Pithoragarh districts. Other sub-sectors of tertiary sector, like the secondary sector, have little contribution in these districts. In the district of Nainital, trade, commerce and transport have more important role to play in providing employment to the working force as it has better developed primary and secondary sectors.

2.3.2 Extent of Unemployment

During the recent decade, increase in population has been phenomenal in all over the country. Kumaon region is not an exception to this. In a race between population growth and growth of employment opportunities, the latter has lagged far behind resulting in an increase in the volume of unemployment. Due to the lack of other avenues of employment, agriculture becomes a residuary occupation⁶⁵ of increasing population. Family rather than individual being the unit of employment in agriculture, under-employment or disguised employment is inevitable. Seasonal nature of agriculture forces idleness for number of months. Moreover, joint family system in rural area providing support to idle and unemployed facilitates rural unemployment.⁶⁶ Unemployed in hill area seek outlet in outmigration but it is not possible for all surplus labour force to migrate outside, so underemployment/disguised employment persists on a large scale in the region.

⁶⁵ Das Nabagopal (1960) : Unemployment and Employment Planning in India, Orient Longman, New Delhi, p.27.

⁶⁶ Vivekanand, Franklin (1981) : "Concept of Unemployment and Methods of Measuring Unemployment in a Underdeveloped Country - India". The Indian Journal of Labour Economics, Vol. XXIV, October, No.3, p.146.

To assess the extent and structure of unemployment is not an easy task⁶⁷ in an agriculture based economy. S.S. Khanka,⁶⁸ in a study of Kumaon region, has attempted to assess the extent and nature of unemployment on the basis of the data from four sources, namely, censuses, employment exchanges, the National Sample Survey and his own field study. Figures from his study in a comparative form are reproduced here in Table 2.22.

Census figure indicate that the incidence of unemployment in Kumaon is much lower than U.P. and India. In 1971, only 0.88 per cent persons of the total working force were unemployed, while the corresponding figures for U.P. and India were 1.33 per cent and 1.84 per cent respectively. A study based on the NSS 27th Round by Economics and Statistics Division of State Planning Institute, U.P. (1972-73) suggests that the exclusively hilly districts of the State had a lower (0.87 per cent) incidence of unemployment than the State as a whole (0.88 per cent) but with the inclusion of semi-hilly districts (Dehradun and Nainital) of the region,⁶⁹ the average of the region as a whole is

⁶⁷ Planning Commission, Government of India, Report of the Committee of Experts on Unemployment Estimates, 1970.

⁶⁸ Khanka, S.S, op. cit, pp.73-100.

⁶⁹ Ibid.

Table 2.22 : Comparative Statement of Estimates of Unemployment Incidence

Source	Year	Almora			Pithoragarh			Nainital			Kumaon		
		P	M	F	P	M	F	P	M	F	P	M	F
Census	1971	T	0.73	0.99	0.35	0.43	0.65	0.12	1.26	1.44	0.88	1.06	0.44
		R	0.56		0.14		0.14		0.33		0.40		5.25
		U	4.23		10.81				5.16				
National Sample Survey	27th Round 1972-73	T*	0.87	1.77	0.16				1.75	1.72	1.84	1.08**	1.74
		R	0.81	1.72	0.12				1.75	1.69	1.90	1.56	0.26
		U	3.13	2.70	5.97				1.75	1.85	-	3.07	2.84
Employment exchange	1971	U	6.90					14.75			3.95		5.09
Sample data	1982 (June- July)	R						4.46					

N.B. : * Comprises Almora, Pithoragarh, Garhwal, Chamoli, Tehri Garhwal and Uttar Kashh.
** Refers to Hill Region.

Source : S.S. Khanika, Labour Force, Employment and Unemployment in a Backward Economy : A Case Study of Kumaon Region, Unpublished Ph.D. Thesis, p.99.

higher than the State average (1.08 per cent). The figures in Table 2.22 reveal that the incidence of unemployment revealed by Census and NSS figures are very close to each-other and identical in trends. Both sets of figures indicate that incidence of urban unemployment is higher than rural unemployment. According to Census figures, rural unemployment in Almora (0.56 per cent) is highest and Pithoragarh (0.14 per cent) is lowest. In Almora and Pithoragarh, incidence of unemployment among males is higher than among females, but the case is just opposite in Mainital. Employment Exchange data reveal the highest degree of unemployment in the urban areas (5.09 per cent) of the region. Among all estimates, the sample data of Khanka's study reveal the highest degree of unemployment in rural Pithoragarh (4.46 per cent). In the face of these different sets of data, Khanka assumes that overall unemployment rate in Kumaon may be in the range of one to two per cent, it being around 1 per cent in the rural and around 4.5 per cent of labour force in the urban areas.⁷⁰

2.3.3 Under-employment or Disguised Unemployment

Assessment of overt unemployment in the context of agricultural economy is not meaningful, as in the case of

⁷⁰Ibid.

self-employed and their dependents the phenomenon is rare.⁷¹ It is meaningful in the context of wage earners only. In this regard, assessment of underemployment is the only right approach.

Underemployment refers to persons whose employment is part time, seasonal or of inherently low productivity.⁷² On the other hand, the term disguised unemployment is used to designate a situation in which an amount of labour force may be withdrawn from the land without affecting its cultivation and production. This reflects the notion that the marginal productivity of workers is zero.⁷³

In Kumaon, periods of harvesting and sowing being short, periods of slackness are comparatively longer. Thus, the degree of underemployment/seasonal employment is higher. To assess this type of unemployment, Khanka has used work-time disposition approach in his study.⁷⁴ Treating a year of 280 days for a worker to be fully "gainfully employed" and treating a worker working less than this period as

⁷¹ Report of the Committee of Experts on Unemployment Estimates, Planning Commission, Govt. of India, 1970, p.15.

⁷² Pant, S.C. (1976) : Indian Labour Problems, Chaitanya Publishing House, Allahabad, p.255.

⁷³ Nurkse, Ragner (1953) : Problems of Capital Formation in Underdeveloped Countries, Oxford University Press, New Delhi, p.32.

⁷⁴ Khanka, S.S, op. cit, p.103.

under-employed he found that the incidence of under-employment was very high i.e. 173 days in case of males and 91 days in case of females. In percentage terms, it comes to be 62 and 32 per cent respectively. In another study, the incidence of under employment was found to the extent of 45.5 per cent.⁷⁵ Mostly, it is the winter season, which provides the minimum employment to the workers.

2.4 Conclusions

Population in Kumaon has registered a faster growth than in U.P. and India since 1901. This growth is particularly spectacular during the decades 1941-81 attributable both to natural increase and migration. Natural increase has played an important role in population growth of Almora and Pithoragarh while in-migration in that of district Nainital.

Physical density of population in Kumaon has always been lower than the State of U.P. and country as a whole, but the density of population measured against the land

⁷⁵Shah, S.L. (1982) : "Micro-Level Planning and Strategies for Agricultural Development in Mid Himalayas : A Study of Koshi-Suyal watershed in the Mid Hills of U.P." (Village Chausali in Hawalbagh Block of Almora District), Vivekanand Laboratory for Hill Agriculture (ICAR), Almora, U.P., p.32.

usable by human beings indicates that the pressure of population on land in Kumaon is the highest.

Despite the similarities in the age composition of population with U.P., the proportion of females in working age groups is higher in the region, particularly in its hilly parts which is attributable to singular out-migration of males. As a result, sex ratio in the region is higher than U.P. and India both. In the hilly part of the region, females upto 1081 per 1000 of males are noticed. Females participation rate is extra-ordinarily higher and working force is overladen by females and children. It has also been noticed that higher quantum of labour force per unit of output is required in the hills.

Backwardness of an economy is also reflected in its working force. More than 80 per cent of working force engaged in agriculture confirms not only the chiefly agrarian character of the economy but also the primitiveness of agriculture in the hilly portion of the region. While secondary sector is merely notional for the region, sub-sector 'other services' of tertiary sector is synonymous with Government jobs, which is the major source of employment after agriculture in the region. Overall range

of unemployment is estimated to be one to two percent. Unemployment in urban areas is found to be more prominent than in rural areas. Underemployment in terms of time unutilised has been estimated upto 62 per cent among males and 32 per cent among females.

CHAPTER III

Structure of Economic Activities

We have discussed the distribution of working population into different occupations or the major activities of regional economy of Kumaon and the extent of under/disguised unemployment in the region in preceding chapter. These phenomenon are largely determined by the structure of economic activities of concerned areas. Status of these activities denote the stage of economic development of the areas. Hence, the structure of economic activities, their nature, magnitude and productivity along with output per head in the region constitute the subject matter of discussion in this chapter.

3.1 Agriculture

3.1.1 Land Utilisation Pattern in Kumaon and U.P.

Figures in Table 3.1 for the year 1980-81 reveal that about 55 per cent of total reported area in Kumaon is under forests which is not available to the population for any direct use due to the natural and statutory reasons. Major forest areas belong to State Government, and constitute Government property for all commercial purposes, barring a few rights to local population. The area reported under

Table 3.1 : Land Utilisation Pattern in U.P. and Kumaon during 1975-76 and 1980-81

	Almora		Pithoragarh		Nainital		Kumaon		Uttar Pradesh	
	1975-76	1980-81	1975-76	1980-81	1975-76	1980-81	1975-76	1980-81	1975-76	1980-81
1. Reported area for land utilisation	763 (100.0)	726 (100.0)	588 (100.0)	619 (100.0)	700 (100.0)	700 (100.0)	2051 (100.0)	2045 (100.0)	29848 (100.0)	29739 (100.0)
2. Forests	426 (55.77)	394 (54.31)	330 (56.19)	403 (53.39)	402 (57.66)	1160 (57.52)	1127 (56.54)	5142 (55.13)	5129 (17.23)	5129 (17.25)
3. Barren uncultivable land	49 (6.27)	35 (4.84)	22 (3.77)	29 (4.75)	7 (0.95)	6 (0.89)	77 (3.74)	71 (3.46)	1213 (4.06)	1141 (3.84)
4. Land put on non-agricultural uses	17 (2.21)	16 (2.20)	12 (1.97)	12 (1.95)	29 (4.11)	30 (4.26)	57 (2.79)	58 (2.83)	2162 (7.24)	2280 (7.67)
5. Cultivable waste	77 (10.14)	69 (9.52)	52 (8.81)	60 (9.62)	35 (4.99)	31 (4.38)	164 (8.00)	159 (7.79)	1493 (5.00)	1148 (3.86)
6. Permanent pastures & other grazing lands	40 (5.28)	51 (6.99)	61 (10.45)	73 (11.76)	1 (0.15)	1 (0.17)	103 (5.01)	125 (6.10)	279 (0.93)	296 (0.99)
7. Orchards	34 (4.47)	40 (5.45)	29 (4.96)	34 (5.45)	14 (2.01)	16 (2.25)	77 (3.77)	89 (4.35)	791 (2.65)	639 (2.15)
8. Rallow	11 (1.43)	7 (1.02)	10 (1.80)	11 (1.66)	9 (1.59)	9 (1.25)	33 (1.59)	27 (1.29)	1567 (5.25)	1885 (6.34)
9. Net area sown	110 (14.40)	114 (15.65)	71 (12.03)	71 (11.42)	200 (28.53)	205 (29.29)	380 (18.55)	389 (19.03)	17201 (57.63)	17221 (57.91)

Source : i. Uttar Pradesh Ke Parvatya Kshetron Main Krishin Utupadan (in Hindi) 1973-74 to 1978-79.

Directorate of Agriculture, U.P.

ii. Zila Shantyaki Patrika : Almora, Nainital and Pithoragarh 1983 (in Hindi) State Planning Institute, U.P.

iii. Statistical Diary, U.P. State Planning Institute, U.P.

forest too includes area under perpetual snow, and alpine pastures and high level blanks. According to satellite imageries, only 38 per cent area of eight hill districts is under forests.¹ About 20 per cent and 8 per cent area is snow bounded and under alpine pastures and high level blanks respectively. As against the 58 per cent of the area as net area sown in U.P., only 19 per cent area in Kumaon comes under this category. For the comparisons of all types, only 8 per cent area lying in Nainital plain falling under this category can be placed at par with the area sown in the plain part of the State. Rest of the net sown area in the region lies in difficult and highly undulating terrains marked by very high degree of erosion, erosivity and erodibility rendering the capability and suitability of land very low for the purpose of intensive agriculture.² Nainital has the highest proportion of area under forest (57 per cent) and also highest proportion of net sown area (29 per cent), while the purely hilly district of Pithoragarh having the smallest proportion of area under

¹Gupta, P.N (1983) : "Land Use Policy in Himalaya and Shiwaliks", in Development of Hill Areas : Issues and Approaches, (eds.) T.S. Papola, B.K. Joshi, H.S. Verma and R.C. Sinha, Bombay, p.395.

²Ibid, pp.381-383.

forest (53 per cent) has the smallest proportion of net area sown (11 per cent). It is due to the low proportion of land under intervening categories in district Nainital which is indicative of a high degree of land capability and suitability for agriculture. As noted earlier, barring 10 per cent of cultivated area lying in the valleys, land is highly inappropriate for agriculture; and soil capability, in all the cases, is very low in the purely hilly part of the region.

As per Table 3.1 proportion of barren un-cultivable land, cultivable waste and fallow have decreased and net area sown has increased over the year 1975-76 in Almora and Nainital districts while the position is found to be reverse in Pithoragarh district. This can be attributed to natural causes rendering more and more land unsuitable for agriculture due to highly fragile nature of terrain, on one hand, and very low productivity of soil forcing population to abandon the agriculture, on the other. Area under orchards has increasing tendency in Kumaon and its districts but it has shown an opposite tendency in the State.

Leaving aside the land in Nainital plain, good land for agriculture is restricted to the valleys in Kumaon but such land constitute only 10 per cent of the total cultivated land.³ With the increase in population over the years, forests were felled to accommodate larger cultivated area; and new villages were established usually at higher altitudes.⁴ The return from agriculture on such lands are not at all commensurate with the labour put in by the people. Even the income received from people working in the plains is lost to this low yielding marginal and sub marginal agriculture.⁵ Cases of abandoned cultivation are also quite common.⁶ Due to the nature of terrain land holdings in hilly part of Kumaon are scattered and small.

3.1.2 Size of Holdings

Most of the holdings are in marginal and small size classes in Kumaon. More than 58 per cent of holdings in

³Ashish, Madhava, "Agricultural Economy of Kumaon Hills"; Threat of Ecological Disaster", Economic and Political Weekly, Vol.XVI, No.28, pp.1058-1059.

⁴Ibid.

⁵Gupta, P.N, op. cit, pp.387-388.

⁶Ibid.

Kumaon are less than 0.5 hectares while the percentage of such holdings is less than 50 per cent in U.P. (Table 3.2). Number of holdings in the size class 0.5 to 2 hectares is greater (36 per cent) in U.P. than in Kumaon (30 per cent). Similarly in higher size classes also, U.P. outstrips Kumaon in proportion of holdings. The structure of land holdings by size is thus somewhat unfavourable in Kumaon than in the State. But certain peculiar features of the land records in the region make the position worse. In Kumaon, when the owner of the landed property dies ownership, in most of the cases/ transferred in a way that the name of elder brother is mentioned and for younger ones 'and others' is recorded in official papers, which does not indicate even the number of younger brothers. In such cases, when partition among brothers takes place, land is unofficially divided among brothers reducing the size of holdings which does not reach official records for years and in some cases for generations, and even transfers at death does not take place in many cases for generations. Sometimes, partition among brothers takes place in the life time of father who is the owner of the land, in such cases number of holding remains one in records but in actual practice it increases by the number of brothers. If this phenomenon is taken into account

Table 3.2 : Percentage Distribution of Number of Holdings in Kumaon and U.P.

Size Classes (Hectares)	Almora			Pithoragarh			Nainital			Kumaon			U.P.		
	N		A	N		A	N		A	N		A	N		A
	1	2	3	4	5	6	7	8	9	10	11	12	13		
Below 0-.5	1970-71	47.49	17.25	46.35	16.94	23.88	2.43	28.68	6.46	39.92	8.47	46.75	8.61		
	1976-77	65.70	23.40	66.50	20.50	34.50	3.40	N.A.	N.A.	58.52	11.79	49.70	10.40		
0.5 - 1.0	1970-71	29.63	29.13	30.78	28.45	17.74	5.40	29.28	17.56	26.29	15.04	20.09	12.41		
	1976-77	19.40	26.70	17.60	23.10	14.90	5.30	N.A.	N.A.	17.76	14.33	19.60	13.40		
1.0 - 2.0	1970-71	17.70	31.93	16.89	30.42	20.86	13.31	28.09	38.04	18.45	20.70	17.19	20.78		
	1976-77	11.40	29.50	11.20	27.10	17.30	12.10	N.A.	N.A.	12.73	19.51	16.40	21.60		
2.0 - 3.0	1970-71	3.71	12.10	4.12	12.75	13.18	13.20	8.58	17.66	6.73	12.86	7.10	14.79		
	1976-77	2.40	11.40	2.80	12.50	11.40	13.40	N.A.	N.A.	4.68	12.68	6.50	14.70		
3.0 - 4.0	1970-71	0.89	4.30	1.04	4.84	8.13	11.54	2.79	7.44	3.15	8.66	3.46	10.20		
	1976-77	0.70	4.30	0.90	6.00	7.20	12.00	N.A.	N.A.	2.32	8.84	3.10	10.10		
4.0 - 5.0	1970-71	0.29	1.72	0.38	2.26	5.02	9.19	1.16	4.33	1.77	6.21	1.94	7.40		
	1976-77	0.20	2.10	0.40	3.30	5.00	10.30	N.A.	N.A.	1.42	6.79	1.80	7.50		
5.0 - 10.0	1970-71	0.27	2.33	0.42	3.50	8.68	24.03	1.19	6.03	2.90	15.31	2.75	15.79		
	1976-77	0.20	2.30	0.40	4.60	8.00	25.80	N.A.	N.A.	2.10	15.60	2.40	14.90		
10.0 and above	1970-71	0.02	1.24	0.02	0.84	2.51	20.90	0.23	2.48	0.79	12.75	0.72	9.94		
	1976-77	0.02	0.60	0.10	2.80	1.80	17.90	N.A.	N.A.	0.47	10.46	0.50	7.40		
Total	1970-71	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00		
	1976-77	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00		
Average	1970-71	-	0.72	-	0.76	-	1.22	-	1.22	-	1.25	-	1.16		
	1976-77	-	0.52	-	0.54	-	2.05	-	N.A.	-	0.89	-	1.06		
X decrease in average size of holding		27.78		28.95		14.22		-		28.80		8.62			

Note : N= Number; A= Area; N.A.= Not available; and Neg. = Negligible
 Source: Agricultural Census in U.P., 1970-71 and 1976-77, Board of Revenue, U.P., Lucknow.

and actual position of holdings is made upto date, the position regarding holdings will present more unfavourable position.

Within Kumaon, the proportion of holdings below 0.5 hectare is about two-third in the purely hilly districts of Almora and Pithoragarh, while it is only one-third in the district of Nainital. Such marginal holdings scattered in rugged terrain are highly uneconomical in the former districts. The proportion in the size classes 0.5 - 2.0 hectares is 31, 29 and 32 per cent in Almora, Pithoragarh and Nainital districts respectively. Above this size class, number of holdings in Almora and Pithoragarh are quite negligible but in Nainital, their number (34 per cent) is considerably higher.

Proportion of area is highest in size class 1 - 2 hectares followed by 5 - 10 hectares and 2 - 3 hectares in U.P. similarly in Kumaon also proportion of area is highest in size class 1 - 2 hectares followed by size class 5 - 10 hectares and 0.5 - 1.0 hectares. In the districts, highest area is concentrated in first-three lower size classes in Almora and Pithoragarh while in Nainital higher proportion of area is found under higher size classes of the holdings (Table 3.2).

In comparison to 1970-71, number of holdings and area under them has increased generally in all the areas in size class below 0.5 hectare, in 1976-77. Contrary to this, in all the higher size classes number of holdings and their area has decreased, in general, which is an indication of widespread fragmentation of holding due to increasing pressure of population. But an interesting phenomenon is witnessed in the case of district Pithoragarh where number of holdings and their area has increased in size classes 4 - 5 hectares and above which can be attributed to abandonment of cultivation of marginal lands due to very low productivity⁷ and sale of land to bigger cultivators by smaller holders.

In comparison to 1970-71, average size of holding has decreased in U.P. and Kumaon both but the decrease is sharper in Kumaon than in U.P. (Table 3.2). In 1970-71, average size of holding in Kumaon (1.25) was greater than U.P. (1.16), but in 1976-77 it has come down to 0.89 hectare in Kumaon while it has decreased to 1.06 hectare in U.P. In the districts of Kumaon, average size of holding is biggest in Nainital (2.05 hectare) and smallest in Almora (0.52 hectare). Rate of decrease is highest in Pithoragarh (29 per cent) and lowest in Nainital (14 per cent).

⁷Ibid.

Due to wide variability in soils from place to place consolidation of holdings Act has not been enforced in the region. Hence, these tiny holdings too are divided in small pieces and scattered at number of places. According to one study, holding of an average farm was scattered over about 8 locations and on the average there were three fields per location each measuring about 0.03 hectares.⁸

3.1.3 Cropping Pattern

About 87 per cent of total cropped area in Kumaon is under cereals, while the proportion of such area in U.P. is 70 per cent (Table 3.3). Pulses cover 11 per cent area in the State but in Kumaon a meagre 3 per cent. Kumaon, however, is at par with the State in area under commercial crops like sugarcane and potato but the cultivation of these crops is, mostly, confined to the plain portion of Nainital district. Proportion of area under other crops which includes oil seeds, is around one-half of the proportion in the State, and that too is mainly contributed by Nainital plain.

⁸Shah, S.L. et.al. (1976) : Fragmentation and Scatteredness of Holdings in Rural Area Development, GB Pant University of Agriculture and Technology, p.59.

**Table 3.3 : Percentage Distribution of Total Cropped Area Under Major Crops
in Kumaon and U.P.**

	Almora	Pithoragarh	Nainital			Kumaon			Uttar Pradesh		
			1975-76	1980-81	1975-76	1980-81	1975-76	1980-81	1975-76	1980-81	1975-76
A. Cereals											
1. Paddy	21.98	20.53	29.79	26.54	29.29	35.31	27.23	29.23	20.00	21.11	
2. Wheat	25.03	34.27	34.03	32.89	42.74	37.32	35.90	35.55	27.28	32.38	
3. Madua	22.47	23.55	17.88	17.27	2.48	2.04	1.1.25	11.38	N.A.	0.68	
4. Maize	1.10	1.30	3.66	3.52	6.47	4.78	4.36	3.51	6.04	4.89	
5. All	97.21	97.22	98.64	89.64	82.78	80.83	86.47	87.40	68.45	70.22	
B. Pulses											
Masoor	0.22	0.87	0.12	4.10	2.40	2.41	1.33	2.29	1.00	1.10	
All	0.42	1.12	0.20	4.67	6.06	4.29	3.30	3.43	15.85	11.42	
C. Commercial Crops											
1. Sugarcane	Neg.	Neg.	0.16	12.52	9.83	6.49	5.03	6.24	5.44		
2. Potato	1.60	0.50	0.79	0.76	0.43	0.68	0.84	0.64	0.83	1.05	
D. Others	0.75	1.65	0.37	5.68	5.03	14.87	2.90	9.14	16.45	18.36	
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Note : Neg. = Negligible and N.A. = Not available.

Source : Uttar Pradesh Ke Krishai Aankare (In Hindi) 1978, 1980 and 1983, Directorate of Agriculture, U.P.

In Kumaon hills, more than 90 per cent of cultivated area is under cereals. Proportion of such area in Almora was 97 per cent and in Pithoragarh 90 per cent in 1980-81, though this proportion in 1975-76, in Pithoragarh district, was 99 per cent. Shift towards masoor cultivation is accountable for this phenomenon. Proportion of area under coarse grains like madua and other millets is considerably high in the hills because these crops grow on less productive soils even without manures and irrigation. Area under paddy and wheat has decreased in Pithoragarh, in 1980-81. This reduction is a result of extension of agriculture in less productive lands due to increasing pressure of population (Table 3.4). On the contrary, area under paddy has increased in Nainital due to the increased irrigation.

3.1.4 Agricultural Inputs

3.1.4.1 Irrigation

Proportion of net area irrigated to net area sown is very low in Kumaon (39 per cent) as against U.P. (55 per cent). Dismally low proportion of irrigated area in Almora (10 per cent) and Pithoragarh (9 per cent) has considerably lowered the average of Kumaon, although, district Nainital has appreciably higher proportion (65 per cent) of area irrigated, during the year 1980-81 Table (3.4).

Table 3.4 : Indices of Agricultural Development in Kumaon and U.P.

	Almora			Pithoragarh			Nainital			Kumaon			Uttar Pradesh		
	1975-76	1980-81	1975-76	1980-81	1975-76	1980-81	1975-76	1980-81	1975-76	1980-81	1975-76	1980-81	1975-76	1980-81	
1. Net area sown as % of total cultivable land	47.4	49.4	43.5	40.6	76.9	78.8	58.1	58.6	81.7	81.7	82.4				
2. Net area irrigated as % of net area sown	10.4	9.6	9.2	8.8	46.2	65.3	28.9	38.8	46.1	54.1	54.9				
3. Per hectare use of chemical fertilisers (kgs.)	4.7	4.3	1.1	2.2	60.3	95.1	32.8	52.0	21.1	21.1	46.8				
4. Percentage Area under HYV															
i. exotic paddy	20.3	29.9	13.6	16.0	45.8	61.8	33.1	47.0	34.5	48.2					
ii. hybrid maize	30.1	16.1	5.1	11.0	19.6	35.3	18.1	28.4	1.7	3.2					
iii. high yielding wheat	22.9	26.6	19.2	20.5	61.2	69.5	40.2	48.4	73.6	76.6					
5. Intensity of cropping	16.3	16.6	16.2	17.5	15.9	16.8	16.1	16.9	134	142					
6. Productivity of Principal Crops															
i. paddy	10.5	9.3	10.4	9.1	19.5	23.3	15.5	17.9	9.3	10.5					
ii. wheat	7.8	10.3	8.9	11.0	14.8	19.3	11.4	15.2	13.6	16.5					
iii. maize	9.6	9.3	9.6	11.4	11.8	17.8	11.3	15.6	7.3	7.3					
iv. madaua	10.3	8.3	10.0	11.3	9.6	12.1	10.1	9.6	N.A.	9.6					
v. pulses	20.9	7.5	20.9	7.5	5.5	7.3	6.3	7.4	8.4	9.0					
vi. sugarcane	182.0	—	185.0	264.6	436.8	514.8	436.8	513.3	405.1	470.9					
vii. potato	34.3	156.6	34.3	156.6	60.4	156.6	41.3	156.6	131.3	156.7					

Source : Ibid.

According to slope and irrigational status, area in hills is divided between 'Talaon' (low lands) and 'Upraon' (up lands). Talaon denotes lands existing in valleys or near some perennial or seasonal stream and, therefore, have access to irrigation but Upraon land at a high level having no means of irrigation are sown with dry crops. Every extension that takes place in agriculture is in Upraon land. Hence, the proportion of area under irrigation has decreased in the districts of Almora and Pithoragarh, during 1975-81. Talaon lands are also of two kinds. First class Talaon land known as 'Seras' having perennial water supply are most prosperous agricultural tracts while ordinary hill side Talaon with intermittent water supply are less fertile.⁹ The latter is found in larger proportion in most hill areas.

3.1.4.2 Fertilisers

Per hectare fertiliser use in Kumaon is 52 kg. as against 47 kg. in U.P. (Table 3.4). But this figure is the result of the high fertiliser use in Nainital plain only. Per hectare use of chemical fertilisers was 95 kg. in Nainital while it was only 2 kg. in Pithoragarh and 4 kg. in Almora, in 1980-81.

⁹Pant, S.D, op. cit, pp.104-105.

3.1.4.3 High Yielding Varieties

Table 3.4 reveals that despite a higher use of HYV in Nainital district, the average for Kumaon is lower than that in U.P., due to very low figures for Almora and Pithoragarh.

Proportion of area under exotic paddy and hybrid maize is the highest in Nainital than in the State but area under high yielding wheat is lower in Nainital than U.P. as a whole.

3.1.5 Mechanisation and Agricultural Implements

Mechanisation in agriculture has been relatively low in Kumaon region as revealed by livestock Census in U.P., in 1978.¹⁰ In hill parts of Kumaon, purely traditional implements are in vogue. Whatever mechanisation has taken place is entirely the monopoly of Nainital plains. The traditional technology is more labour intensive but less productive. Undulating terrain put severe limitations on the use of modern technology and implements.

¹⁰ Livestock Census in U.P., 1978, Board of Revenue, U.P.

3.1.6 Cropping Intensity

Intensity of cropping is relatively very high in Kumaon. Figures in Table 3.4 show that cropping intensity in Kumaon (169) is far greater than U.P. (142). It is highest in Pithoragarh (175) followed by Nainital (168) and Almora (166). With a high extent of area irrigated, use of chemical fertilisers, and area under HYV, a high intensity of cropping in Nainital is well understood but in case of Almora and Pithoragarh, it is not commensurate with the use of inputs and extent of irrigation. In this regard, it can be said that the higher intensity of cropping in Almora and Pithoragarh is not due to the improvement in agriculture but is an outcome of high population pressure on an economy facing blocked structural diversification. Limited cultivable land combined with the lack of other resources of employment and income has led the people to eke-out as much as possible from that land through intensive cultivation.¹¹

3.1.7 Productivity of Principal Crops

Table 3.4 reveals that productivity of most of the major crops in Kumaon, is higher than in U.P. Keeping in

¹¹Cf. Tewari, G.C. (1982) : An Economic Profile of the Hill Region of Uttar Pradesh, Occasional Paper No. 10, G.B. Pant Social Science Institute, Allahabad, p. 28.

view the extraordinary fertility of Tarai belt of district Nainital, the position is justifiable. In Nainital district, productivity of all major crops has witnessed a sharply increasing trend which is commensurate with the extent of irrigation and use of inputs. Except pulses, productivity of all major crops in Nainital is above State average. In Kumaon hills, productivity of all major crops except wheat and potato is on decline in Almora, while in Pithoragarh, except paddy and pulses, productivity of all major crops shows an increase. Though, the productivity of most major crops in U.P. is higher than that of the Kumaon hills yet the difference is not as marked as expected in the face of topography, climate, accessibility, extent of irrigation and degree of use of inputs. Contrary to this, productivity of number of major crops is higher than U.P. in 1975-76, which does not seem to be plausible. Despite high productivity, however, about 75 per cent of region's requirements of food-grains is imported from outside.¹² In the face of this situation, the validity of official figures regarding productivity of food grains in the hills is rather suspect.

¹²Ashish Madhav, op. cit, p.1058.

In this perspective, a brief review of method of estimation of crop yield per hectare in hills will not be out of place. In the hills, even within a small distance of one kilometre, wide variability in soils, topography, climate and slopes etc. exists, this phenomena is rare in the plains. Consolidation of holdings Act was not enforced in the hills due to this reason. According to settlement reports in which classification of land is based on the status of cultivation and irrigation, irrigated areas includes Seras, Pacher and Simar; unirrigated lands includes, Upraon, Abbal and Doyam; up-land unterraced areas are marked as Ijran and shifting cultivated areas as Khil and Katil. Fertility of soil widely varies in these categories of lands, which is further intensively affected by elevation, slope, aspect, vegetation, accessibility, cultural practices etc. Land of Seras is put at par with lands in Indo-Gangetic plains.¹³ But such lands constitute only ten per cent of total cultivated area. Official figures of productivity of major crops seem to be inflated as the existing method of crop cutting selecting two fields and plots in one of the selected villages at supervisor Kanoongo circle level for

¹³ Pant, S.D. (1935) : The Social Economy of Himalayans, George Allen and Unwin, p. 105.

estimation of yield,¹⁴ seems to be biased to good lands only. Stratification of lands according to revenue classification and carving substrata according to slope, elevation, aspect etc. would have provided the better basis for selection of fields for crop estimation. With every change of slope, aspect, elevation and size of plots etc. productivity of fields vary considerably. Some times terrace to terrace variations are very wide due to the reasons mentioned above.

3.2 Livestock

Of the total livestock population of the State 3.5 per cent are in Kumaon. Data of livestock population in U.P. and Kumaon are given in Table 3.5. People in the hills generally prefer to keep more animals than the people elsewhere. The main motive behind this is not to get more milk but to provide more manure to the fields. As the fertility of soils is generally low in the hills, dung is essential to maintain the yield. Only buffaloes are stall fed, cows, bullocks and other livestock graze in the forests and pastures in the day time. Night fodder is given only when it is easily available.

¹⁴ Uttar Pradesh Ke Parvatiya Khetron Main Krish Utpadan 1973-74 to 1978-79 (in Hindi), Directorate of Agriculture, U.P.

Table 3.5 : Livestock Population in Kumaon and Uttar Pradesh (1961-78)

	Almora			Pithoragarh			Nainital		
	1961	1978	% Variation	1961	1978	% Variation	1961	1978	% Variation
1. Cattle	351302 (52.2)	366960 (50.6)	(+) 4.4	286970 (57.1)	310378 (49.6)	(+) 8.1	312318 (68.4)	278897 (56.4)	(-) 10.7
2. Buffaloes	127435 (18.9)	151568 (20.9)	(+) 18.9	88200 (17.5)	95810 (15.3)	(+) 8.6	105114 (23.0)	149443 (30.4)	(+) 42.2
3. Total	478750 (71.1)	518666 (71.6)	(+) 8.3	375451 (74.7)	406196 (65.0)	(+) 8.2	417506 (91.5)	428340 (87.0)	(+) 2.6
3. Sheep	40292 (6.0)	31387 (4.3)	(-) 22.1	35081 (7.0)	58689 (9.4)	(+) 67.3	1995 (0.4)	1986 (0.4)	(-) 0.4
4. Goats	152583 (22.7)	172959 (23.9)	(+) 13.3	90061 (17.9)	158096 (25.3)	(+) 75.5	30051 (6.6)	54657 (11.1)	(+) 81.9
5. Other Livestock	1392 (0.2)	1622 (0.2)	(+) 16.5	1974 (0.4)	2277 (0.4)	(+) 15.3	6897 (1.5)	7189 (1.5)	(+) 4.2
Total Livestock	673017 (100.0)	724434 (100.0)	(+) 7.7	502567 (100.0)	625258 (100.0)	(+) 24.4	456449 (100.0)	492172 (100.0)	(+) 7.8
Poultry	22692	44831	(+) 97.6	5804	29855	(+) 414.4	82821	139178	(+) 68.0

contd./-

Table 3.5 - Contd.

	Kumaon			Uttar Pradesh		
	1961	1978	% Variation	1961	1978	% Variation
1. cattle	950527 (58.2)	956235 (51.9)	(+) 0.6	26284 (53.2)	25773 (49.2)	(-) 1.9
2. buffaloes	320749 (19.6)	396821 (21.5)	(+) 23.7	10976 (22.2)	13965 (26.7)	(+) 27.0
Total bovine	1271707 (77.9)	1353202 (73.5)	(+) 6.4	37260 (75.4)	39739 (75.9)	(+) 6.6
3. sheep	77368 (4.7)	92062 (5.0)	(+) 19.0	2462 (5.0)	2059 (3.9)	(-) 16.4
4. goats	272695 (16.7)	385712 (20.9)	(+) 41.4	7958 (16.1)	8462 (16.2)	(+) 6.3
5. other livestock	10263 (0.6)	11088 (0.6)	(+) 8.8	1724 (3.5)	2085 (4.0)	(+) 20.9
Total Livestock	1632033 (100.0)	1842084 (100.0)	(+) 12.9	9404 (100.0)	52345 (100.0)	(+) 5.9
Poultry	121317	213864	(+) 76.3	3254	5497	(+) 68.9

Note : 1. Figures in parenthesis denote percentages, 11. total bovine includes yaks.

Source: 1. All India Livestock Census 1961 (U.P., Vol. II), Directorate of Economics and Statistics, Ministry of Food and Agriculture.

11. Directorate of Animal Husbandry, U.P. (Indian Livestock Census, 1978).

Proportion of cattle in total livestock has been decreasing in U.P. and Kumaon. Pithoragarh is the only district in Kumaon where population of cattle is increasing. Buffaloes are increasing at a faster rate in all areas. They have recorded the highest increase (83 per cent) in 1981 over 1961, in district Nainital. Proportion of sheep has increased in Kumaon but it has shown reverse trend in U.P. upto 1978. Goats, other livestock and poultry has shown increase in U.P. as well in districts of Kumaon; specially goats and poultry has recorded a very high rate of increase.

Livestock Census 1982 has given breed-wise data of livestock which are available for Kumaon and given in Table 3.6. Proportion of cattle has decreased by 3 per cent in the region. Decrease is highest in Nainital (13 per cent) followed by Almora (1 per cent). Decrease in Almora is attributable to decreasing pastures and grazing lands while in Nainital to mechanisation of agriculture reducing the number of bullocks and substitution of many low productive indigenous cows by fewer ones of high productive cross-breeds. Nainital has higher proportion of cross-breed cattle in comparison to Almora and Pithoragarh. Proportion of buffaloes is highest in Nainital (32 per cent)

and lowest in Pithoragarh (17 per cent). Proportion of sheep is highest in Pithoragarh due to the reason that Bugyals (Alpine pastures) and population adept in woollen crafts is concentrated in that district. Highest proportion of crossbreed sheep (18 per cent) are found in that district. Goats play a little role in the productive activities of the hills. They are not used as a milch animal like in plains. They are either sold to towns for meat purpose or to local people for propitiation of local deities. Their meat does not go to enrich the rural diet. They do enormous damage to the forests and pastures. Unfortunately they constitute a large part of the livestock population in Kumaon. They out number buffaloes in all areas of hilly Kumaon and they have recorded as high growth as buffaloes over 1961. Population of other livestock is nominal in Almora and Pithoragarh.

Major portion of livestock in the hills is uneconomic and total liability. Even for the purpose of dung they are not much useful as they graze all over the day and only night dung is available. Bullock are used for ploughing only and average ploughing days are not more than 15 in a year.¹⁵ But every cultivator owning even a 0.4 hectare

¹⁵ Ashish, Madhav, op. cit., p. 1062.

Table 3.6 : Livestock Population in Kumaon in 1982

	Almora		Pithoragarh		Nainital		Nainital Hills		Kumaon							
	Number	% variation	Number	% variation	Number	% variation	Number	% variation	Number	% variation						
	1961-82		1961-82		1961-82		1961-82		1961-82							
1. Cattle	346314	(-)	1.4	306377	(+)	6.8	271963	(-)	12.9	42405	(+)	0.9	924654	(-)	2.7	
a. Indigenous	337488	(48.5)		(50.5)			(45.1)			(51.2)			(48.0)			
b. Crossbreed	8826	(97.4)		293338			229855			80857			860681			
2. Buffaloes	142323	(2.6)	(+)	11.7	104385	(+)	18.3	192388	(+)	83.0	32989	(+)	32.9	439096	(+)	36.9
3. Sheep	37197	(19.9)	(-)	7.7	57348	(+)	63.5	(31.9)		(20.5)			(22.8)			
a. Indigenous	31011	(5.2)		(9.4)			(0.6)			(0.2)			(5.1)			
b. Crossbreed	6186	(83.4)		47034			3454			296			81499			
4. Goats	171314	(16.6)	(+)	12.3	120057	(+)	33.3	79256	(+)	163.7	35460	(+)	91.9	370627	(+)	35.9
5. Pigs	272	(23.9)	(+)	294.2	(0.04)	(0.1)	2378.9	(13.1)		(22.1)			(19.3)			
a. Indigenous	271			642			2624			(0.4)			(0.2)			
b. Crossbreed	1			(0.1)			(0.1)			1698			2323			
6. Other Livestock	17093	(2.4)	(+)	778.8	18383	(+)	1519.6	52838	(+)	799.1	9557	(+)	487.8	88314	(+)	886.0
Total Livestock	714513	(100.0)	(+)	6.2	607192	(+)	20.8	602831	(+)	32.7	160769	(+)	26.7	1924536	(+)	17.9
Poultry	40314	(+)	23.3	32966	(+)	468.0	259997	(+)	213.9	13366	(+)	230.7	333777	(+)	175.1	

Note : 1. Figures in parenthesis denote percentages. 11. Percentages of indigenous and crossbreed are based on the total livestock of the respective category.

Source: Shankhyakiya Patrika (1983) of Almora, Pithoragarh and Nainital districts, Economics and statistics Division, State Planning Institute, Lucknow.

of holding also keeps the bullock. Productivity of milch animals is poor by the State average, only the production of wool per sheep and egg per bird can be deemed satisfactory. Productivity of livestock products are given in Table 3.7.

Table 3.7 : Productivity of Livestock Products

	Total Productivity		Productivity per Livestock	
	State	Hills	State	Hills
Milk (lakh M tons)	53.348	3.125	C 1.488	1.041
			B 2.763	1.937
Eggs (lakhs)	2237.6	179.9	108.4	108.09
Wool (lakh kg.)	14.497	3.041	0.721	1.019

C = Cow B = Buffaloe

Source : Annual Survey of Production of Livestock Products 1976-77, Department of Animal Husbandry, U.P.

The reasons behind the low productivity of milk, are suffering of animals by mal-nutrition and under nutrition, under the existing State of livestock management practices in the hills. Forests and grazing lands are unable to sustain the existing number of livestock. Due to the continuous over grazing, regeneration of nutritious grasses

has stopped. Grazing pressure has increased so high that even one hectare of land per 2 animal unit is not available. For this simple reason, grazing animals are under fed in Kumaon. Figures pertaining to grazing pressure in Kumaon are given in Table 3.8.

Taking the carrying capacity of the grazing land at 2 animal units per hectare grazing incidence is more than double, and in most cases more than three times in all the three districts in all years. In 1961 and 1966, grazing incidence in Nainital was highest, taking the above mentioned animal unit as ideal it was 3.2 and 3.6 times more than the carrying capacity of grazing lands. In 1972-74, it was highest in Pithoragarh which was 4.1 times more than the carrying capacity.¹⁶ Over-grazing destroys seedlings and saplings in one hand, and cut the ground soil by animals hoves on the other. All these factors are exacerbating the ecological destabilisation of the region as well as of northern India as a whole.

¹⁶ Gupta, P.N., Afforestation, Integrated Watershed Management, Torrent Control and Land-use Development Project for U.P. Himalayas and Shiwaliks, U.P. Forest Department, pp.1-58.

Table 3.8 : Grazing Pressure in Kumaon

Cattle unit	Almora			Pithoragarh			Nainital		
	1961	1966	1972- 76	1961	1966	1972- 74	1961	1966	1972-74
Cows	4	3.420	3.461	2.913	3.708	3.657	5.14	4.230	4.393
Buffaloes	8	1.878	1.951	1.215	1.567	1.542	2.35	2.135	2.542
Sheep	1	0.081	0.085	0.007	0.147	0.181	0.185	0.007	0.007
Goat	2	0.524	0.607	0.152	0.455	0.606	0.581	0.152	0.223
TOTAL	5.903	6.104	4.681	5.877	5.986	8.258	6.523	7.164	7.372

source : Gupta, P.N. (1979) : Afforestation, Integrated Watershed Management, Torrent Control and Land Use Development Project for U.P. Himalayas and Shiwaliks.

3.3 Activities other than Agriculture

In the absence of any precise data regarding the activities other than agriculture, returns of economic Census of 1977 and 1980 are being utilised to assess the position of enterprises other than agricultural production and plantation in the region. Economic Census 1980 covers all agricultural enterprises comprising livestock production, agricultural services, hunting, trapping and game propagation, forestry and logging and fishing, and all other activities termed as non-agricultural activities. Agricultural production and plantation are, however, excluded from the economic Census. In 1977, only non-agricultural enterprises hiring one or more workers were covered and own account enterprises were excluded. Figures regarding these enterprises are given in Table 3.9.

The table reveals that in 1980, only 3 per cent of total enterprises in U.P. were found in Kumaon, of which about 50 per cent were accounted for by district Nainital leaving a very meagre share for the hilly districts of Almora and Pithoragarh. Of the total enterprises in Kumaon about 4 per cent belonged to agricultural group and rest to non-agricultural group conforming to the proportion in U.P. In the districts, proportion of non-agricultural group was highest in Almora (98.3) and lowest in Nainital

Table 3.9 : Enterprises in Kumaon and U.P.

	Year	Almora		Pithoragarh		Nainital		Kumaon		Uttar Pradesh	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
I. Total enterprises											
1. Agricultural enterprises	1980	18974 (0.87)	100.00 (0.64)	14184 (0.59)	100.00 (1.47)	32352 (1.47)	100.00 (2.99)	65512 (2.99)	100.00 (2.99)	2170 (100.0)	100.00 (100.0)
2. Non-agricultural enterprises	1980	314 (0.35)	1.65	584 (0.66)	4.12	1459 (1.64)	4.51	2357 (2.65)	3.60	89 (100.0)	4.10 (100.0)
II.											
1. Own account enterprises	1980	15102 (0.89)	79.59	10459 (0.59)	73.74	21857 (1.30)	67.56 (2.78)	47418 (2.78)	72.38	1689 (100.0)	77.83 (100.0)
2. With one or more hired workers	1977	3011 (0.88)	100.00	3005 (0.88)	100.00	6155 (1.76)	100.00	12171 (3.53)	100.00	340 (100.0)	100.00 (100.0)
III. Person Usually Working in all enterprises											
1. Agricultural enterprises	1980	800 (0.50)	2.25	823 (0.52)	3.09	3838 (2.51)	4.37	5461 (3.14)	3.64	159 (100.0)	2.82 (100.0)
2. Non-agricultural enterprises	1977	20980 (0.68)	100.00	14121 (0.45)	100.00	57917 (1.87)	100.00	93018 (3.00)	100.00	3093 (100.0)	100.00 (100.0)
3. Hired workers usually	1980	34766 (0.64)	97.75	25789 (0.47)	96.99	84009 (1.53)	95.63	144564 (2.65)	96.36	5470 (100.0)	97.17 (100.0)
	1977	20220 (0.72)	96.38	13625 (0.50)	96.49	53634 (1.94)	92.60	87479 (3.16)	94.04	2778 (100.0)	89.81 (100.0)
	1980	18178 (0.66)	51.11	13388 (0.47)	51.91	51538 (1.87)	58.67	83104 (3.04)	55.39	2733 (100.0)	48.55 (100.0)

Source : Economic Census, U.P. 1977 and 1980, Economic and statistics Division, State Planning Institute, Lucknow.

(94.5). But in absolute numbers both agricultural and non-agricultural enterprises in Nainital far exceed the number of these enterprises in Almora and Pithoragarh.

Proportion of own account enterprises is lower in Kumaon in comparison to the State. High proportion of enterprises with one or more hired workers in Nainital and Pithoragarh is responsible for this phenomenon. In Almora, the proportion of own account enterprises is higher than State average. Predominance of own accounts enterprises indicate low level of economic activities and employment and while opposite is true in the case of higher number of enterprises with one or more hired workers. Of such total enterprises in Kumaon, about 50 per cent were functioning in District Nainital both in 1977 and 1980. In comparison to 1977, enterprises with one or more workers has increased by by more than four thousands in Nainital while they have increased by a few hundreds in Almora and Pithoragarh. In U.P., only 56 lakhs workers are employed in these enterprises as against around 83 lakhs reported by 1981 Census. In Kumaon, 1.50 lakhs worked as against the Census figures of 2.30 lakhs are found working in these enterprises. Of the total workers employed in U.P., only 2.7 per cent are employed in Kumaon region as a whole. More than half of the workers

employed in Kumaon were found in Nainital and rest were shared by Almora and Pithoragarh. Proportion of workers employed in agricultural enterprises is higher in Kumaon than in U.P. in conformity with the pattern of the distribution of concerned enterprises.

Figures relating to hired workers reveal that non-agricultural group of enterprises has been the main employer of such workers. In 1977, when economic Census covered only non-agricultural enterprises with one or more workers only, percentage of hired workers is around 90 per cent in U.P. but in Kumaon, it is still higher with highest percentage of 96 in Almora and Pithoragarh districts. However, the data regarding the persons usually working in all enterprises and hired labour usually engaged in 1977 and 1980 economic Census are not comparable due to the change in coverage.

Over-all level of these activities in the region is dismally low as the share of Pithoragarh and Almora in these enterprises is less than one per cent of total enterprises in the state. Similar is the position of employment in these enterprises since the major portion of them is located in the well developed part of Nainital. Contribution of Trade, Commerce and Industry is very low, both in respect of income

and employment (Tables 2.21 and 3.10). The reasons behind this phenomenon in the region are stated in the draft Sixth Five Year Plan of the State. Its peculiar geographical conditions and the undulated nature of the terrain impose severe constraints on the pace of development on the one hand, and efficacy of infrastructural facilities on the other.¹⁷ Moreover, consumption needs swallow all of the income earned locally and received by remittances from the out migrants. This does not leave any investible surplus with local people. As a result, new opportunities requiring new skills, enterprise and capital are seized upon more promptly and vigorously by outside entrepreneurs having superior skills, enterprise and capital.¹⁸ Major forests produce like logs, resin and herbs with horticultural produce like fruits, chillies etc. are exported as raw material to the far off places in plains to feed different industries.¹⁹ The enterprises in the region are often in tertiary rather than in productive sectors; they sometime displace more traditional employment than the new employment

¹⁷ Planning Department, U.P., Draft Sixth Five Year Plan 1980-85 (Review), Vol.I, p.127.

¹⁸ Joshi, P.C., Perspective for Planners from above and Peoples' Participation from below : The Problem of Bridging the Hiatus; also see Pande, G.C (1983) : Field Reports on Socio-Economic Achievements and Emerging Issues in Hill Development, in Development of Hill Areas : Issues and Approaches, (eds.) T.S. Papola et.al., Bombay, pp.34, 94-95.

¹⁹ Joshi, P.C., op. cit, p.39. Also see Chandresh Shanshadhans, Shramshakti aur Khyatria Shoshan ka Tanabana (in Hindi), Pehar 1, 1983, pp.81-98.

Table 3.10 : Estimates of Total Income by Commodity Producing Sectors and Per Capita Income of Kumaon and U.P. (1975-76 at current prices)

Agriculture and Allied activities					Total income	Per capita income (Rs.)
	Agriculture and animal husbandry	Forestry and logging	Fishing	Mining & quarrying	Registered	Un-registered
Almora	34.07 (83.14)	6.20 (15.13)	-	-	0.01 (0.02)	40.98 (100.0)
Pithoragarh	23.32 (84.10)	3.65 (13.16)	-	-	-	0.76 (2.74)
Nainital	60.51 (76.13)	9.85 (12.39)	2.67 (3.36)	-	4.30 (5.41)	2.15 (2.70)
Kumaon	117.90 (79.56)	19.70 (13.29)	2.67 (1.80)	-	4.31 (2.91)	3.61 (2.44)
Uttar Pradesh	3665.49 (82.11)	84.28 (1.89)	15.30 (0.34)	14.33 (0.32)	328.73 (7.36)	356.08 (7.98)
						4464.21 (100.0)
						465.50

Note : Figures in parenthesis denote percentages.

Source : District Domestic Net Output, U.P., Bulletin No. 187, Economics and Statistics Division, State Planning Institute, Lucknow.

that they create.²⁰ Thus, all the local resources and income followed by individuals roll down to the plains instead of creating any multiplier effect locally.

3.4 Income Structure

All the aspects discussed so far, indicate that the region as a whole except the plain portion of district Nainital is underdeveloped and economically backward. But to our great surprise, the figures of income and per capita income do not support this conclusion. Income figure place Kumaon in the category of a relatively developed regions of the State as the per capita income of the region and its constituent districts is quite high in comparison to the State average. Estimates of total income and per capita income for commodity producing sectors are given in Table 3.10.

As regards income from commodity producing sectors, Kumaon and U.P. both are heavily dependent on agriculture and allied activities as they are the major contributors of the income. While the share of this sector in Kumaon is 95 per cent, it is about 85 per cent in U.P. Share of

²⁰ Joshi, P.C, op. cit, p.35.

manufacturing (registered and unregistered both) is 5 per cent in Kumaon and 15 per cent, (i.e. 3 times higher than Kumaon) in U.P. High proportion of agricultural income and low proportion of income from manufacturing in Kumaon in comparison to State reflects its relative backwardness. But the figures relating to per capita income Rs.721 in Kumaon as against Rs.465 in the State do not support the view that Kumaon is a backward region. One of the reasons for high per capita income in Kumaon is its well developed district of Nainital which surpasses all other district of State in agricultural development. But this reason does not give sufficient explanation as two other purely hilly districts are also far ahead of the State average as regards the per capita income. Another reason for this phenomenon seems to be inclusion of total income from forestry in the income of the region. Share of forestry in total income of commodity producing sectors is 13 per cent in Kumaon as against only 2 per cent in the State. This income results from logging and extracting activities in the forests. But these items are generally exported out of the region. What accrues to region in the form of income are wages paid to the labourers for these activities. According to one estimate based on the information collected from the office of the conservator of forest, Nainital, wages paid for forestry and

Table 3.11 : Estimates of Total Income by Commodity Producing Sectors Excluding Income from Forestry and Logging and PCI in Kumaon and U.P. (1975-76 at current prices)

	Agriculture & Allied activities					Manufacturing		Total output	Per capita income (Rs.)
	Agriculture and animal husbandry	Forestry and logging	Fishing	Mining & quarrying	Registered	Un-registered			
Allura	34.07 (95.49)	0.90 (2.52)	—	—	0.01 (0.03)	0.70 (1.96)	35.68 (100.0)	442.13	
Pithoragarh	23.32 (94.68)	0.55 (2.23)	—	—	—	0.76 (3.08)	24.73 (100.0)	724.41	
Nainital	60.51 (85.25)	1.35 (1.90)	2.67 (3.76)	—	4.30 (6.06)	2.15 (3.03)	70.98 (100.0)	780.86	
Kumaon	117.90 (89.93)	2.80 (2.10)	2.67 (2.03)	—	4.31 (3.28)	3.61 (2.75)	134.25 (100.0)	638.37	
Uttar Pradesh	3665.49 (83.46)	11.82 (0.27)	15.30 (0.35)	14.33 (0.33)	328.73 (7.48)	356.08 (8.11)	4391.75 (100.0)	457.95	

Note : Figures in parenthesis denote percentages.

Source : Ibid.

logging services constitute only 14 per cent of the total income from the forestry.²¹ This is, perhaps, the actual income accruing to the region from forestry. Working on this estimate and assuming the proportion of wages same for U.P. also, we have prepared the revised estimate, for income from commodity producing sectors in U.P. and Kumaon in which income from forestry contains wage component only (Table 3.11).

Exclusion of income from forestry does not lead to any noticeable change in sectoral composition of income in areas but per capita income figure gets considerably reduced to Rs.638 from Rs.720 in the region while it leads to a nominal reduction (Rs.458 from Rs.465) in the State. Nevertheless, per capita income in the region and its districts except Almora remains higher than the State average. With the addition of income from sub-sector construction and tertiary sector, it rises further higher from State average even in Almora (Table 3.12).

The sectoral composition which emerges with the addition of 'construction' and 'other services' indicate that after

²¹ Khanka, S.S. (1983) : Labour Force, Employment and Unemployment in a Backward Economy : A Study of Kumaon Region in U.P., p.223. According to Khanka's estimate percentage of wages to total produce was 14.55 in Almora, 15.16 in Pithoragarh, 13.71 in Nainital and 14.03 in Kumaon.

Table 3.12 : Estimates of Total Income by Sectors and Per Capita Income for Kumaon and Uttar Pradesh (1975-76 at current prices)

	Agriculture & Allied activities						Manufacturing			Other sectors (services)		Total income (Rs. in crores)	per capita income (Rs.)
	Agriculture and animal husbandry	Forestry	Fishing	Mining and quarrying	Regis-	Un-regis-	Con-						
					tered	tered	truc-	tion					
Almora and Pithoragarh	57.39 (67.39)	1.45 (1.70)	-	-	0.01 (0.01)	1.46 (1.71)	18.93 (22.23)	5.92 (6.95)	85.16 (100.0)	742.46			
Nainital	60.51 (51.10)	1.35 (1.14)	2.67 (2.25)	-	4.30 (3.63)	2.15 (1.82)	35.37 (29.87)	12.06 (10.18)	118.41 (100.0)	1302.67			
Kumaon	117.90 (57.92)	2.80 (1.37)	2.67 (1.31)	-	4.31 (2.12)	3.61 (1.77)	54.30 (26.67)	17.98 (8.83)	203.57 (100.0)	990.13			
Uttar Pradesh	3665.49 (52.40)	11.82 (0.17)	15.30 (0.22)	14.33 (0.20)	328.73 (4.70)	356.08 (5.09)	460.22 (6.58)	2143.16 (30.68)	6695.13 (100.0)	729.41			

Note : Income for construction and other service are estimated from the percentage of these incomes given in Appendix 12, Inter-regional and Inter-district Variations in Levels and Growth of Income in Uttar Pradesh, 1968-69 to 1976-77 (Mimeo.), estimated by R.C. Sinha, GRDS, Lucknow, 1983.

Source: Ibid.

agriculture, construction is a major contributor to the income in Kumaon and 'other services' occupies the third rank while other services occupies the position next to agriculture in the State. Manufacturing and construction occupy third and fourth ranks respectively. Since construction is not a long lasting activity, manufacturing is the main component of the secondary sector which presents a very poor picture even in the well developed district of Nainital in comparison to State.

The problem of matching the per capita income level and the notion of development or backwardness between the Hill and other regions, thus, still remains to be explored. It would, for instance, be interesting to examine as to how the per capita income from agricultural sector in the hill region was almost at par with that of the western region in spite of the marked difference in agricultural technology and cropping pattern.²² Besides, a difference of very high degree exists in topography, climate and soils of hills and other regions of the State.

²²Cf. Sinha, R.C. (1983) : Inter-regional and Inter-district Variations in Levels and Growth of Income in Uttar Pradesh, 1968-69 to 1976-77, (Mimeo.), GIDS, Lucknow, p.34.

As regards the high PCI in the region, Sinha tries to find it out in high proportion of administrative population and low density of population per unit of area.²³ Administrative population in all the districts and regions of the State is a common phenomenon, and PCI has nothing to do with density of population as it is the direct result of levels of production and productivity. High PCI from agricultural sector will have to be ascertained in agricultural production and productivity in relation to population. We have already discussed productivity of major crops earlier. Figures regarding total production of food grains and per capita production, in 1980-81, are given in Table 3.13.

The table reveals that per capita production of food-grains for total and rural population is almost double in Kumaon than in U.P. Keeping in view the geographical characteristics and use of modern technology in agriculture in the Tarai of Nainital, there is enough scope for the justification of official statistics but in case of Almora and Pithoragarh with highly primitive agriculture facing numerous geographical odds, they seem to be highly unrealistic

²³ Ibid.

Table 3.13 : Total and Per Capita Production of Food-Grains in Kumaon and U.P.

Production of total food-grains (M. T.) 1980-81	Population 1981	Per capita production of total food-grains during 1980-81 (Mts.)			Per day, per capita availability of food-grains (mts.)
		Total	Rural	Total	
Almora	1,15,838	7,57,373	7,09,777	1.53	1.63
Pithoragarh	1,19,912	4,89,267	4,62,248	2.45	2.59
Maintal	2,91,223	11,36,523	8,24,080	2.56	3.53
Kumaon	5,66,073	23,83,163	19,96,105	2.37	2.84
U. P.	1,41,42,913	11,08,62,013	9,09,62,898	1.27	1.55
				348	424

Source : 1) Census of India, 1981, Part II-B, Uttar Pradesh, Primary Census Abstract.

11) Uttar Pradesh Krishi Aankare (in Hindi) 1983, Directorate of Agriculture, Uttar Pradesh.

and inflated. In an evaluation report of a specialised programme implemented for the development of agriculture and allied activities in already developed and accessible areas of district Almora, it is observed that the achievement of agricultural development programme in the district were not spectacular. The progress of cropping intensity, area under HYV, use of fertilisers and HYV seeds and area under irrigation was not as impressive as in the neighbouring district of Nainital which had no such project.²⁴ If this is the position of valley lands i.e. "Seras", which are put at par with Indo-Gangetic plains in respect of fertility, the position of up-lands can be imagined. As we have already noted earlier, area under irrigation has declined in Almora and Pithoragarh. In Pithoragarh, even net area sown has declined over-time and cases of abandoned agriculture due to low fertility, are also noticed.

A look at the figure of per capita per day availability of locally produced foodgrains indicate that even the districts of Almora and Pithoragarh of Kumaon are not only superior to rest of State in the production of food-grains

²⁴ Das, B.C. and Rayal, B.D. (1983) : "Evaluation of Indo-German Agricultural Development Agency, Almora", in (ed.) T.S. Papola et.al, Development of Hill Areas : Issues and Approaches, op. cit, p.223.

but self-reliant also. As against U.P. (348 gms.) per day per capita, availability of food-grains is much higher in Almora (419 gms.) and Pithoragarh (671 gms.). If we take into account the infants below 4 years of age and old and infirm above 55 years of age having less in-take capacity for food-grains, Almora and Pithoragarh have definitely an exportable surplus. In spite of these tall official claims, the region is not self-sufficient in the production of foodgrains²⁵, and remains a net importer of food-grains from the plains to the tune of almost 75 per cent of its annual subsistence requirements.²⁶ An another estimate puts forth that "the deficit between the food-grain production and the requirements of hill districts has been calculated as ranging between 24 per cent and 80 per cent."²⁷

From the exposition made above, it can be concluded that the official estimates do not portray the actual position of agricultural production in the hills and are over-estimated to a large extent. As reported in some other

²⁵ Zila Almora Ki Settlement Report (in Hindi), Board of Revenue, U.P., 1965, p.13.

²⁶ Ashish Madhav, op. cit., p.1058.

²⁷ Juyal, B.N. (1983) : Inter-regional Inequality and the Process of National Development : The Case of Uttrakhand, in Development of Hill Areas : Issues and Approaches, op. cit., p.50.

official document²⁸, crops are good in valleys due to irrigation and high temperature, but yields go on decreasing with every increase in the altitude. As noted earlier, there are wide variations in productivity of crops according to status of cultivation and irrigation conditioned by geographical and other features. In the plains, such a variabilities in the soil and productivity seldom exist, at least, in a smaller area and conditioning of geographical features are virtually non-existent over large areas. Therefore, the method of crop estimation applicable to plain areas, can not give fair results in the hills unless they are modified according to the needs of the area. Unless the areas are stratified according to revenue classification and geographical features we will get inflated or deflated estimates. Stratification according to administrative units will not serve any useful purpose.

Patwaris in the hills are entrusted with the duty of enforcement of law and order as well as revenue administration. Duty of estimation of area under different crops and estimation of yields, which is developmental in nature,

²⁸ Settlement Reports, Almora (1965), Pithoragarh (1966), Mainital (1963-64), Board of Revenue, U.P.

adds a third dimension to his duties. Given the heavy burden of law and order functions, it seems highly doubtful that a Patwari would be able to draw a correct sample for the estimation of area and crop, and there is likelihood for the bias for good lands in his sample selection.

Another reason for inflated estimates of income in Kumaon may be the use of whole-sale prices of food-grains prevailing in some selected urban centres of the purely hilly districts of the region, at post-harvest period. It is a well known fact that these areas have virtually no marketable surplus of food-grains. Our observation in the field reveals that after curtailing their needs and substituting the consumption of superior grains by inferior ones for the want of liquidity to fulfil other needs like clothing, payment of land revenue etc, whatever is spared for marketing by comparatively bigger holding owner, is sold locally to their needy neighbours. Weights and measures used for such deal are purely local and primitive. Denominations of these measures differ area to area. Instead of weight, quantity of food-grains contained by these instruments, matters most. Moreover, such sales do not take place in post harvest period as every household possesses food-grains at that period either from their fields or earned as payment of wages.

In such circumstances, to get the idea about the post-harvest average prices of locally produced food-grains, is difficult without some systematic efforts. According to rough estimates, they are generally lower than the prices charged at rural ration shops. On the other hand, whole-sale prices prevailing at the urban centres selected by State Statistical Bureau for price collection, belong to the food-grains produced in Nainital plains and other neighbouring districts of the plain lying outside the region and include the profit of whole-saler at the origin, transportation and other service charges and profit of whole-saler at the destination. These prices have, virtually, no effect upon rural prices and vice-versa. Towns of Almora, Pithoragarh, Nainital and Haldwani in the region are price collection centres of State Statistical Bureau. Almora and Nainital towns are fed by foothill town of Haldwani while Pithoragarh is fed by foothill town of Tanakpur. Whole-sale prices pertaining to the year 1975-76 (Table 3.14) clearly indicate that these prices of all major food-grains at Almora and Pithoragarh tend to be higher than the prices prevailing in all the neighbouring markets of the plains. Non-reporting from Nainital indicates that there seem to be no whole-saler in that town as it is very near to Haldwani, and retailers seem to get direct supply from wholesalers at Haldwani.

Table 3.14 : Average Peak Period (Harvest) Whole-sale Prices at Some Major Grain Markets in U.P. (1975-76)

Centres	Wheat	Rice	Jwar	Bajra	Maize	Barley	Urd	Moong	Gram	Rape & Mustard seed	Linseed	Potato	Bajra (wheat & barley)
Almora	130.13	158.10	-	-	-	-	-	145.00	-	-	-	45.95	-
Pithoragarh	118.62	161.86	-	-	-	-	-	238.67	239.00	-	-	76.76	-
Nainital	-	-	-	-	-	-	-	260.62	-	-	-	-	-
Haldwani	98.75	154.20	-	73.30	71.17	62.05	226.00	215.15	123.53	199.63	-	41.42	14.25
Pilibhit	90.50	99.25	-	-	-	49.17	222.00	199.33	111.90	198.50	-	40.00	16.25
Bareilly	92.50	156.25	79.47	81.42	68.52	54.55	177.50	199.08	110.42	205.90	174.36	30.37	16.58
Moradabad	92.12	132.80	98.17	85.98	70.60	55.23	185.17	250.33	121.85	202.33	152.17	42.25	19.30
Hapur	94.50	170.10	97.40	82.20	72.40	59.55	162.00	158.75	120.92	190.85	-	25.17	17.91
Agra	96.00	165.64	94.70	86.48	79.23	62.17	162.33	162.33	113.77	190.70	206.37	37.10	18.05
Lucknow	94.00	163.80	79.08	83.83	76.28	60.70	215.33	181.00	119.01	191.33	179.25	35.66	17.70
Kanpur	99.75	164.37	82.32	86.30	71.40	60.43	203.42	158.92	122.33	192.52	191.15	29.95	20.85
Allahabad	124.37	146.46	95.86	86.74	75.71	65.64	220.40	181.47	117.57	185.80	186.67	62.38	21.63
Etawah	93.25	148.04	-	91.76	71.68	64.05	189.05	187.50	111.00	191.66	-	28.77	20.27
Varanasi	104.03	176.13	84.57	91.78	70.13	65.61	176.93	153.42	130.48	190.40	184.92	33.58	17.13
Faizabad	90.25	151.15	-	-	89.25	57.75	234.00	-	110.55	180.15	161.05	37.00	18.93
Gorakhpur	100.69	183.60	-	-	83.75	54.05	212.00	-	121.70	204.00	167.83	34.17	11.93
Jhansi	109.25	210.76	89.40	-	-	55.88	133.25	121.08	133.67	169.87	173.20	39.37	16.92

Source : Price Registers, 1975-76 and 1976-77, Economics & Statistics Division, State Planning Institute, U.P.

Comparative level of prices at Almora and Pithoragarh confirms that they include the profit of whole-salers and transportation and other service charges. Valuation of local agricultural produce by these prices inflates income levels in Almora and Pithoragarh.

As regards the assessment of milk yield, it is stated that "it was possible to account for variations in yield rates of milk per animal only at the regional level and regional yield rates were assumed to hold good for all districts in the region".²⁹ It has already been noted that intra-region variation between the breed of milch animals, animal feed and cattle management practices, particularly, between hilly and plain parts of the region, are very wide. Hence, it is most likely that the variation in the milk yield per animal, is also wide. In prevailing circumstances, the likelihood of regional average of milk yield inflating the milk yield per animal of Almora and Pithoragarh districts, cannot be avoided.

However, per capita income if estimated correctly, may be a useful tool in focussing attention on the extent

²⁹Methodology of Estimating District Domestic Net Output, Uttar Pradesh (Commodity Producing Sectors), State Planning Institute, Economics and Statistics Division, U.P., Lucknow, p.4.

of poverty but it does not reflect the difference in per capita real income and the standard of living. The serious shortcomings of this measure, as pointed out by Myint, however, relate to inadequacy of converting State income statistics at National exchange rate, quantification of welfare associated with changing composition of output and distribution of income, varying degree of monetisation in different States and the differences in the concepts used for computation of national or regional income.³⁰

3.5 Conclusions

In the region, 55 per cent of total reported areas is under forests. This area, mostly, belongs to the Government and is not available to local inhabitants for any direct and significant use due to natural and statutory reasons. The proportion of net area sown to total reported area is only 19 per cent as against 58 per cent in the State. Net area irrigated is a meagre proportion (39 per cent) of net area sown; it is dismally low in Almora (10 per cent) and Pithoragarh (9 per cent) districts. Barring the lands in valleys and Nainital plain, land is highly inappropriate

³⁰ Myint, H. (1969) : The Economics of Developing Countries, Hutchinson University Press, p.1.

for agriculture; and soil capability in all the cases is very low. Hence, improved agriculture is next to impossible in the hills.

Livestock population including poultry (2.25 millions) is almost equal to human population (2.38 millions). The motive behind rearing livestock is not so much to get milk as to get dung for manure. Animals are mostly ill fed having a very low significance from economic point of view. They are, on the other hand, a danger to the ecological stability of the region.

A very poor proportion (3 per cent) of total enterprises (excluding agricultural production and plantation) in the State are found in the region. About half of them are located in the Nainital district alone. These enterprises, in the region are often in tertiary rather than in productive sector, which, sometimes, displace more traditionally employed workers than they employ. Since most of the income generated locally or received from outside drains outside the region in exchange for consumption goods, local people do not find any capital to establish new enterprises. Hence, a strong tendency to migrate outside the region, is found.

A good part of the income (from commodity producing sectors) accounted for in the region, does not really accrue locally. Total income from forestry is accounted in the credit of the region while only wages (14 per cent of the total income from forestry) for extraction and logging activities accrues to the people living in the region. Besides, the methodology commonly adopted for income estimation all over the State, does not seem to be adequate for the assessment of the income from agricultural production and animal husbandry, in the region.

CHAPTER IV

Nature and Extent of Migration

Migration is a necessary element of normal population adjustment and equilibrium, and a mechanism for optimum allocation of human resources over space and activities. Besides, it is also an instrument of cultural diffusion and social integration.¹ Generally, migration is supposed to take place from less developed areas to better developed areas. Movements to and from different areas are determined by several complex economic, social, geographical and numerous other factors. In this and the subsequent chapters, we will examine these processes and factors in the context of Kumaon region with the help of Census data and also the primary data collected by us through a sample survey. Comparative figures for India and U.P. have also been used in the analysis of secondary data.

For defining migration and other terms, we have adopted the concepts used by Census of India. A person enumerated at a place other than the place of his birth, is treated a migrant. A person is an 'out-migrant' from the place of

¹ Bouga, D.J. (1959) : Internal Migration, in the Study of Population, (ed.) Hauser, P.M. and Duncan, O.D., Chicago, pp. 486-487.

origin and 'in-migrant' to the place of residence. Since Census accounts provide only indirect estimation of out-migration on the basis of aggregation of in-migrants in different places reporting a district as their origin, our primary survey has attempted a direct measure of out-migration from the villages. Information was collected about all persons living away from the family excluding women given away in marriage. For the analyse of socio-economic characteristics and purpose of migration, we have included all the out-migrants but for the analysis of causes and consequences of migration, we included only those migrants who had moved outside the village in search of job. Cross classification of migrants by rural/urban place of enumeration in relation to their rural/urban place of birth is termed as stream of migration. Migration streams are identified as rural-rural, rural-urban, urban-rural and urban-urban. These streams are further classified by space which are the political boundaries viz. with in district (intra-district); outside the district but within the State (inter-district); outside the State but within the country (inter-State); outside the international boundary (International). The rate of migration is generally, defined as the ratio of migrants observed to the population exposed to the likelihood of migrating during a specified migration

interval.² But we have used the concept of rate of migration as is used by Census of India in which all time migrants are accounted as percentage of the population of a particular Census.

4.1 Emigration to and from India

Though, India has been mainly a place where the natives stay at home and foreigners stay away, both the departure of Indians to other areas and the entrance of foreigners into India have been important enough to create international problems.³ It is true that movements to and from India have

²Migration rates are calculated as follows:

$$m = \frac{M}{P} \quad k \quad \dots \dots (1)$$

m = the rate of migration during a specified migration interval,

M = the number of persons defined as migrants during the interval,

P = the population exposed to the likelihood of migration during the interval,

k = a constant usually 1,000 general in migration rates $m_i = \frac{I}{P} \quad k \quad \dots \dots (2)$

General out-migration rate $m_o = \frac{O}{P} \quad k \quad \dots \dots (3)$

Net migration rate $m_n = \frac{I-O}{P} \quad k \quad \dots \dots (4)$

I = total number of in-migrants received by a community.

O = total number of out-migrants lost by a community.

P = total mid-interval population of the community.

k = a constant usually 1000.

³Davis, Kingsley (1951) : The Population of India and Pakistan, Princeton, p. 93.

less of a significance in demographic and economic terms and more of in political terms. As regard volume crossing into the frontiers of India, it is stated that large flocks of individuals namely Aryans, Sakas, Huns, Muslims etc. entered India from the north-western passes from time to time in historical past. But for the want of empirical evidences and remote antiquity of immigration, it is neither possible nor is it intended here to examine them. Our concern is with the more recent period for which also a very limited information is available. Census reports provide the number of foreign born persons enumerated in India but the complete count of Indian living abroad is not available. Whatever is available, is far from complete. In 1931, only 0.2 per cent of the population constituted of those who were born outside the country. At the same time, the United States had 11.6 per cent of its population born outside, France had 6.6 per cent, Yugoslavia 2.2 per cent, and England and Wales had 0.8 per cent.⁴ From a comparative point of view, India cannot be treated a country of immigration.

The relative position of foreign born in India from 1891 onwards, is given in Table 4.1.

⁴Ibid.

Table 4.1 : Foreign Born as Percentage of Population, 1891 - 1971

	CENSUSES							
	1891	1901	1911	1921	1931	1951	1961	1971
Foreign born as percentage of population	0.23	0.23	0.22	0.19	0.20	2.4	2.4	1.7

N.B. : Figures for 1941 were not tabulated.

Source: 1. Davis, Kingsley, The Population of India and Pakistan, Princeton University Press, 1935, p. 94.

2. Saxena, G. B., Indian Population in Transition, New Delhi, 1971, p. 132.

3. Census of India, 1971, Series I, India, Part II-D, (i) Migration Tables.

The table reveals that the proportion of foreign born in the population remained virtually fixed, varying between 0.23 to 0.19 upto 1931. It rose to 2.4 in 1951 but remained stationary in 1961 and declined in 1971. This spurt was caused by the partition of country in 1947 followed by a mass-scale immigration of refugees from Pakistan. Due to the political division of the country and unprecedented immigration of refugees from Pakistan, a strict comparison of foreign born in India between pre and post partition periods cannot be made. However, if the population

enumeration as born in Pakistan is dropped from the calculation in the last two Censuses, the proportion of foreign born in India in 1951, and 1961, was roughly 0.12 per cent and 0.17 per cent, respectively. These proportions would be roughly in line with that of 1931.⁵

Immigrants have mostly been of Asiatic origin followed by Europeans and others. Proportion of Asiatic immigrants ranged between 78 per cent to 83 per cent of total immigrants, while that of Europeans between 15 per cent to 20 per cent and others between 1.6 to 2.5 per cent. They were drawn by diversity of motives. While Chinese came as carpenters and shoe-makers, Afghans as traders of foreign wares; Gurkhas as soldiers; English as trader and rulers; and Tibetan Buddhists to worship; and Nepalese women in marriage.

As regards overseas movement "it began, so far as significant numbers are concerned, in 1834 when slavery was abolished in British Empire and notorious indenture system was inaugurated. Since that time, it has continued in fluctuating fashion".⁶ Since the exact number of those

⁵ Saxena, G. B. (1971) : Indian Population in Transition, New Delhi, p. 134.

⁶ Davis Kingsley, op. cit., p. 98.

left and returned is not possible to ascertain, we have to remain content with the estimates of Kingsley Davis who put them around 30 millions between 1834 to 1937. Out of them, around 24 millions returned back leaving the net balance of around 6 millions at the end of 1934. From comparative point of view, India sent numerically larger but proportionately small numbers. By the time Indians started, the virgin territories in colonies were already pre-empted by Europeans and others, consequently they met discrimination and maltreatment on racial, cultural and on other grounds, wherever they went. As a result, India born Indians and their descendants living abroad were reduced to slightly more than 4 millions at the time of partition, in 1947. During second world war period and in post-independence era, many Indians settled and born in Burma faced permanent repatriation. Presently, Tamils of Indian origin are facing and indulging in violence on ethnic grounds in Sri Lanka. As a result, thousands of refugees are crossing over to India every week. "In fact, Indian emigration has been of greater importance politically than geographically, because of treatment of Indians overseas".⁷

⁷ Ibid.

Most of the immigration to India routed through land but about 90 per cent of emigration took place through sea as most of the receiving countries have been those accessible by water routes e.g. Burma, Cylone, British, Malaya, Mauritius, Fiji, the Caribbean, and East Africa. The areas of emigration were not necessarily near India; they were mostly tropical areas in British colonies accessible by water. The main purpose to obtain Indian emigrants was to replace the emancipated slaves in plantation areas. Due to the abject poverty at native place they were easily induced to leave and were more suitable for adjustment in tropical conditions. The position of persons of Indian descent settled abroad around 1940, is given in Table 4.2.

Table 4.2 : Persons of Indian Descent Settled Abroad and their Percentage of Total Population Around 1940

Place	Date	Number (000*)	Per cent
Mauritius	1940	272	67
Fiji Islands	1941	102	45
British Guiana	1938	143	44
Trinidad and Tabago	1938	158	40
Cylone	1941	1963	33
Dutch Guiana	1938	44	29
British Malaya	1941	766	14
Aden & Parim	1939	8	13
Burma	1941	1018	6
Zanzibar & Pemba	1939	16	6
French Guiana	1936	2	5
Union of South Africa	1946	285	3

(Countries or colonies with 2 per cent or more)

Source : Reproduced from "The Population of India and Pakistan", by Kingsley Davis, 1951, p. 102.

The table shows that Indian migrants constituted majority of the population in Mauritius and they were in good number in Fiji Islands, British Guiana, Trinidad and Tobago and Cylone.

The above account of immigration to and emigration from India suggest that neither of them have had any significant effect upon the population growth of this country nor are they likely to have in future. What is more important in terms of size and analytical implications, is the internal migration in the country to which we turn now.

4.2 Internal Migration in India

In a country like India, which is large in size and full of diversities, movements of population are large, but very small in proportion to the size of large population. People in India are deeply attached to their native place. That is why, it is said that "the population of Indian region is low in the scale of mobility".⁸ This observation of Kingsley Davis is based on the figures of inter-state migration in India and some other countries in some Censuses. In 1940, the native population of United States living outside the State of birth was 22.5 per cent of the total

⁸Davis Kingsley, op. cit, p.107.

native population while only 3.6 per cent population of India was enumerated outside the province or State of birth, and only 9.8 per cent outside the district of birth. In Australia, in 1934 persons living outside the province of birth were 24 per cent of total population; in Bulgaria, in 1934 those living outside the arrondissement of birth were 16.2 per cent; and in Yugoslavia those living outside the banovine of birth were 7 per cent. The proportion of inter-state migration remains unchanged till 1971. The figures of inter-state migration in India are presented in table below.

Table 4.3 : Inter-State Migration in India

Year	Total Population (in millions)	Migrants as percentage of total population
1891	279.2	3.6
1901	238.4	3.3
1911	252.1	3.6
1921	251.3	3.7
1931	279.0	3.6
1941	316.7	-
1951	361.1	3.1
1961	438.9	3.3
1971	548.1	3.3

Source : 1. SenGupta, P. and Sadasyuk, G, Economic Regionalisation of India, Table 4, p.80.

2. Agrawala, S.M, Some Problems of India's Population, 1966, Table 3, p.124.

3. Census of India, 1961, India, Migration Tables.

4. Census of India, 1971, Series I, Part II-D (1), Migration Tables.

It is surprising to note that trends of inter-state migration are unchanged during last eight decades. On the basis of the figures upto 1931 Census, the low mobility of Indian population is attributed to the predominance of agriculture, the caste system, early marriage and joint family system, diversity of language and culture, lack of education etc.⁹ These reasons do not seem hold good in modern times as the circumstances have undergone a great deal of change due to social, political and economic development. These developments are certain to have bearings on the trends and volume of internal migration yet the statistics do not indicate such a change.

Some notable features of migration statistics from the Censuses may be mentioned here.

1. The place of birth statistics given in the Census includes migration due to marriage; due to prevailing custom among number of Hindu wives to return to their parents for first confinement; and other accidental non-migratory movements.
2. Except for 1951-61, Census figures do not show internal migration during any particular period of time. It only shows the survivors or cumulative or all time migrants since birth or the date of migration. Even the figures relating to the survivors of cumulative migrants

⁹Davis Kingsley, op. cit. p.108.

after 1931 Census are not comparable because in 1941 the figures of internal migration were not collected except in the States of Bombay, Bihar, Orissa and Madhya Pradesh where figures relating to those born outside the State were collected on the basis of one per cent sample.

3. A de-facto method of counting migrants in 1931 was changed to de-jure method in 1951, which has made valid comparison difficult.
4. Frequent changes in political boundaries of States and districts has also made comparison difficult.
5. Timing of our Censuses falling round about the timing of festival of Holi which is celebrated in most part of the country, enhances the chances of visiting migrants to be enumerated at the place of birth.

Moreover, the aforesaid discussion is based on the figures of inter-state migration and at the most on the migration taking place beyond the boundaries of the district. Short-distance or intra-district movements are left unaccounted. Prior to 1961 Census, only the movements beyond the district were enumerated. It is only 1961 onwards, the figures of those enumerated at the place other than the place of birth are available, and are presented in Table 4.4.

Table 4.4 : Population of India by Place of Enumeration

Place of enumeration		1961		1971	
		P	P	M	F
I. Total population	Total	438.9	548.1	284.0	264.1
		(100.0)	(100.0)	(51.8)	(48.2)
	Rural	360.0	439.0	225.3	213.7
		(82.0)	(80.1)	(51.3)	(48.7)
	Urban	78.9	109.1	58.7	50.4
		(18.0)	(19.9)	(53.8)	(46.2)
II. Persons enumerated at the place of birth	Total	294.20	381.4	230.3	151.1
		(67.0)	(69.6)	(60.4)	(39.6)
	Rural	250.6	315.1	193.6	121.5
		(85.2)	(82.6)	(61.4)	(33.6)
	Urban	43.6	66.3	36.7	29.6
		(14.8)	(17.4)	(55.3)	(44.6)
III. Persons enumerated at the place other than the place of birth	Total	144.8	166.7	53.9	112.8
		(33.0)	(30.4)	(32.3)	(67.7)
	Rural	109.7	123.9	31.3	92.1
		(75.8)	(74.3)	(25.7)	(74.3)
	Urban	35.1	42.8	22.1	20.7
		(24.2)	(25.7)	(51.6)	(48.4)
a. Persons enumerated elsewhere in the district of birth	Total	92.1	103.5	26.0	77.5
		(63.6)	(62.1)	(25.1)	(74.9)
	Rural	81.1	90.5	20.2	70.3
		(88.0)	(87.4)	(22.3)	(77.7)
	Urban	11.0	13.0	5.8	7.2
		(12.0)	(12.6)	(44.6)	(55.4)
b. Persons enumerated in other districts of the State	Total	28.7	35.2	13.3	21.9
		(19.8)	(21.1)	(37.8)	(62.2)
	Rural	17.7	20.8	5.9	14.9
		(61.7)	(59.1)	(28.4)	(71.6)
	Urban	11.0	14.4	7.4	7.0
		(38.3)	(40.9)	(51.4)	(48.6)
c. Persons enumerated in other states in India	Total	14.5	18.6	9.6	9.0
		(10.0)	(11.1)	(51.6)	(48.4)
	Rural	6.0	7.5	3.0	4.5
		(41.4)	(40.3)	(40.0)	(60.0)
	Urban	8.5	11.1	6.6	4.5
		(58.6)	(59.7)	(59.4)	(40.5)
d. Foreign born enumerated in India	Total	9.5	9.4	5.0	4.4
		(6.6)	(5.6)	(53.2)	(46.8)
	Rural	4.9	5.1	2.7	2.4
		(51.6)	(54.2)	(52.9)	(47.1)
	Urban	4.6	4.3	2.3	2.0
		(48.4)	(45.7)	(53.5)	(46.5)

Source : 1. Census of India, 1961, Vol. I, No. 1, India, Part II-C, (iii), Migration Tables, p. 16.

2. Census of India, 1971, Series 1, India, Part II-D, (i), Migration Tables.

The table reveals that the proportion of those enumerated at the place other than the place of birth was one-third (33.0 per cent) of the total population in 1961, which has decreased by 2.5 percentage points in 1971. Majority of migrants have covered short distances only as the proportions of intra-district migrants have been 64 per cent in 1961, and 62 per cent in 1971. Inter-district migration has accounted for 20 per cent and 21 per cent of migrants in 1961, and 1971, respectively. Inter-state migration has been just one-half of the inter-district migration in both the decades. The proportion of foreign born in India has come down by one percentage point among total migrants in 1971. They numbered 9.5 million in 1961, and 9.4 million in 1971 bringing their proportion down from 2.2 to 1.7 per cent in total population. Thus, it is observed that during the period 1951-71, absolute migration showed a declining trend. While intra-district migration has decreased, inter-district and inter-state migration has shown the tendency towards increase. It indicates that while the decrease in nearby opportunities is pushing the migrants farther, opportunities at distant places are pulling the migrants towards them.

More than two-thirds of the migrants are female (Table 4.5). During the decades 1951-60 and 1961-70, the

Table 4.5 : Migrants by Sex

Type of Movements	Year	Person	Male	Female
Intra-district	1961	67.8	54.4	73.8
	1971	66.0	53.0	71.6
Inter-district	1961	21.4	26.8	19.0
	1971	22.4	27.2	20.2
Inter-state	1961	10.8	18.8	7.2
	1971	11.6	19.2	8.2
All Movements	1961	100.0	30.8	69.2
	1971	100.0	30.9	69.1

Source : Ibid.

sex composition of migrants has remained unchanged. But one-thing which clearly emerges from this analysis is that the distance deters more the mobility of women than men. In intra-district movements females far exceed the males, while in inter-district and inter-state movements the proportion of males is higher than females, and the proportion of females has more sharply gone down than the proportion of males. This is due to the fact that marriages usually take place in nearby places in India, and wives accompanying husbands also do not move very far due to social and cultural reasons.

The scene of internal migration in India is dominated by marriage migration as more than two-third of the migrants are female. Bulk of the women migrate for marriage or to accompany the migrant husbands. In rural India, particularly among Hindus, women are generally married out of village, so every married woman is a migrant at her husband's place. In urban areas also, majority of rural women migrate to marry or to accompany the earning members of the household.

In sharing the migrants between rural and urban destination, we find that the 'lion's share' i.e. three-fourth of the total migrants including foreign born were to the rural areas and only one-fourth to urban areas in 1971 (Table 4.4). Among those with rural areas as destination, majority consisted of females (74 per cent) while among those migrating to urban areas, males (52 per cent) exceeded females. In other words, we can say that majority going to the former was of the seekers of life partners; and to latter was of the job-seekers.

The data on migrants by migration streams (Table 4.6) reveals that 86 per cent of the total internal migrants were of rural and 14 per cent were of urban origin in 1971. Of migrants with rural origin, 70 per cent moved to other

Table 4.6 : Migration Streams in India

	Rural to Rural		Rural to Urban		Urban to Rural		Urban to Urban		
	1961	1971	1961	1971	1961	1971	1961	1971	
Intra-district	P	85.0	82.9	9.0	9.8	3.0	4.6	3.0	2.7
	M	73.7	71.7	16.6	17.5	4.2	6.1	5.4	4.6
	F	88.7	86.6	6.5	7.2	2.5	4.1	2.2	2.1
Inter-district	P	56.4	51.8	22.9	23.0	5.2	7.5	15.4	17.7
	M	42.1	37.2	32.8	33.1	5.5	7.6	19.5	22.0
	F	65.4	60.5	16.6	16.9	5.0	7.4	12.9	15.1
Inter-State	P	36.8	34.1	33.6	31.5	4.5	6.9	24.9	27.5
	M	28.3	25.8	41.7	39.4	4.1	6.2	25.9	28.6
	F	46.8	42.7	24.4	23.2	5.0	7.6	23.8	26.5
All movements	P	73.7	70.3	14.6	15.3	3.6	5.5	8.6	8.9
	M	56.7	53.5	25.7	26.0	4.5	6.5	13.0	13.9
	F	31.3	77.7	9.7	10.5	3.1	5.0	5.8	6.7

Note : P = Person; M = Male; and F = Female

Source: 1. Census of India, 1961, Vol. I, No. 1, India, Part II-C(iii), Migration Tables, p. 16.

2. Census of India, 1971, Series 1, India, Part II-D(i), Migration Tables.

rural areas and the proportion of total migrants with all origins going to rural areas was 76 per cent. Even among total male migrants 60 per cent were enumerated in rural areas. In comparison to 1961, rural to rural drift showed a decline in 1971 while rural-urban, urban-rural and urban-urban drifts showed an increasing tendency. But the urban to rural stream seems to have grown stronger than rural to urban stream as migration from urban to rural is higher by 2 percentage points as compared to rural to urban by one percentage point in 1971, over 1961.

Migration has played a prominent role in the growth of the population of metropolitan cities and other larger towns as compared to smaller towns,¹⁰ as a meagre proportion crosses district boundary and even a smaller part of that goes to urban centres. Short-distance moves are mainly directed to rural areas as 88 per cent of rural-rural and urban-rural migrants in intra-district movements, and 59 per cent of such migrant in inter-district movements in 1971, have arrived at rural areas. The trend is just

¹⁰ According to 1961 Census the population growth by migration has been witnessed as 44 per cent in Delhi, 11 per cent in West Bengal, 6 per cent in Assam, 3 per cent in Maharashtra, 2 per cent in Madhya Pradesh and one per cent in Mysore during 1951-61. It has also been noticed that of the total net migrants reaching to these States 99 per cent in Delhi, 98 per cent in Maharashtra, 78 per cent in West Bengal and 57 per cent in Madhya Pradesh are found in urban areas. It construes that major rural-urban and urban-urban streams are mainly directed to metropolises like Delhi, Bombay and Calcutta etc. (Saxena, G. B., 1971, Indian Population in Transition, Delhi, Table 6, pp. 148-49 and Table 3, p. 168.)

reverse in longer distance moves as 59 per cent of inter-state migrants have arrived at urban areas. These trends confirm the proposition that most long-distance migration is to urban areas whereas most short-distance migration is to rural areas. As noted earlier, rural moves are dominated by females while the urban moves by males. The decline in the proportion of migration in 1971 over last decade is due to the proportionate decline in rural to rural movements, which may be attributed to creation of more local employment opportunities and services like education etc; daily commuting in place of migration due to developed means of transportation; and rise in the marriageable age of girls. Intra-district urban to urban movements show a decrease while such moves to inter-district and inter-state are on increase. Generally, district level towns in most of the districts in India are smaller towns, and movers originating in these towns prefer to move to bigger towns which are generally situated outside the district or the State. Plight of population from smaller towns to big cities is clearly evident from the table as the inter-district and inter-state urban to urban migration has increased by 3 percentage points in 1971 over the last decade (Table 4.6).

4.3 Migration in U.P.

The proportion of population enumerated at the place of birth suggests that the stability of the population in U.P., is higher than the national average. In 1971, the proportion of such population in U.P. was 75 per cent while it was around 70 per cent in India (Table 4.7). The increase in the degree of stability in U.P. by 5 percentage points over 1961 is also higher as compared to 2.6 percentage points in India. Of the one-fourth population which is migrant, 23 per cent are migrants within the State and 2 per cent are in-migrants from outside the State. It is interesting to note that the population of U.P. has increased by 14.6 millions in 1971, over 1961 but the number of migrants has marginally declined from 22.1 millions, in 1961 to 22.0 millions, in 1971. Another noticeable feature of migration streams in U.P. is that, 80 per cent of migrants are female and 82 per cent have migrated to rural destinations. Both of these averages are remarkably higher than the national averages. About two-third of the migrants have moved within the district of birth, and a little more than one-fourth have crossed the district boundary. Women predominate all types of movements except the inter-state movements directed to urban areas.

Table 4.7 : Population of U.P. by Place of Enumeration
(in millions)

		1961		1971	
		P	P	M	F
I. Total Population	Total	73.7 (100.0)	88.3 (100.0)	47.0 (53.2)	41.3 (46.8)
	Rural	64.2 (87.1)	75.9 (85.9)	40.2 (53.0)	35.7 (47.0)
	Urban	9.5 (12.9)	12.4 (14.1)	6.8 (54.8)	5.6 (45.2)
II. Population enumerated	Total	51.6 (70.0)	66.3 (75.1)	42.6 (64.2)	23.7 (35.8)
1. Place of birth	Rural	45.7 (88.6)	57.8 (87.2)	37.7 (65.2)	20.1 (34.8)
	Urban	5.9 (11.4)	8.5 (12.8)	4.9 (57.6)	3.6 (42.4)
2. Place other than the place of birth	Total	22.1 (30.0)	22.0 (24.9)	4.4 (20.0)	17.6 (80.0)
	Rural	18.5 (83.7)	18.1 (82.3)	2.5 (13.8)	15.6 (86.2)
	Urban	3.6 (16.3)	3.9 (17.7)	1.9 (48.7)	2.0 (51.3)
a. Elsewhere in the district of birth	Total	14.5 (65.6)	14.2 (64.5)	2.1 (14.8)	12.1 (85.2)
	Rural	13.4 (92.4)	13.0 (91.5)	1.6 (12.3)	11.4 (87.7)
	Urban	1.1 (7.6)	1.2 (8.5)	0.5 (41.7)	0.7 (58.3)
b. Other districts of the State	Total	6.0 (27.1)	6.0 (27.3)	1.6 (26.7)	4.4 (73.3)
	Rural	4.3 (71.7)	4.2 (70.0)	0.7 (16.7)	3.5 (83.3)
	Urban	1.7 (28.3)	1.8 (30.0)	0.9 (50.0)	0.9 (50.5)
c. Indian population born beyond U.P. enumerated in the State	Total	1.1 (5.0)	1.2 (5.4)	0.5 (41.7)	0.7 (58.3)
	Rural	0.6 (54.5)	0.7 (58.3)	0.2 (28.6)	0.5 (71.4)
	Urban	0.5 (45.5)	0.5 (41.7)	0.3 (60.0)	0.2 (40.0)
d. Born outside India enumerated in the State	Total	0.5 (2.3)	0.6 (2.7)	0.4 (66.7)	0.2 (33.3)
	Rural	0.2 (40.0)	0.2 (33.3)	0.1 (50.0)	0.1 (50.0)
	Urban	0.3 (60.0)	0.4 (66.7)	0.3 (75.0)	0.1 (25.0)

Source : 1. Census of India, 1961, U.P., Part II-C (iii), Cultural
and Migration Tables.
 2. Census of India, 1971, U.P., Series 21, Part II-D (i),
Migration Tables.

The pattern of migration streams in U.P. is similar as in India. Rural to rural migration predominate all other streams accounting for 79 per cent of total internal migration within the State (Table 4.13). Rural to urban stream (10 per cent) stand next followed by urban to urban (6 per cent) and urban to rural stream (4 per cent) occupies the last position.

We notice two peculiarities with regard to the inter-State movers in U.P. - firstly, those arriving in rural areas numerically exceed those arriving in urban areas; secondly, proportion of males among the urban to urban movers has declined in 1971. The former may be attributed to the high degree of in-migration from the rural areas of adjoining States to the rural areas of contiguous districts of U.P. and settlement of large number of farmers from Punjab in the tarai of Uttar Pradesh; and latter to the declining charm of economically over populated cities of U.P. for the town dwellers of other States.

Using place of birth statistics, Census of India and other students of demography have tried to work out some useful information about in-migration and out-migration from various regions/states within the country. The figures regarding the all time net migration to and from U.P. are

presented in Table 4.8. U.P. has been a net loser of population to other States of India almost in all decades. Out-migration from U.P. has maintained a persistant trend and does not give any indication of a tendency of decrease in its volume.

Table 4.8 : Net All-time Migration in U.P.
1891-1961

Decades	Population (in '000)	Net migrants (in '000)	Net migrants as percentage of popu- lation
1891-1901	47692	(-) 892	(-) 1.9
1901-11	48014	(-) 816	(-) 1.7
1911-21	46511	(-) 972	(-) 2.1
1921-31	49615	(-) 1065	(-) 2.1
1931-41	56346	(-) 42	(-) 0.1
1941-51	63216	(+) 42	(+) 0.1
1951-61	73746	(-) 1466	(-) 2.0
1961-71*	883	(-) 21	(-) 2.4

* Information is based on advance one per cent data of 1971 Census.

Sources: 1. Census of India, 1901, Vol. I, Part-I, p. 97.
2. Census of India, 1911, Vol. I, Part-II, p. 141.
3. Census of India, 1931, Vol. I, Part-I, p. 79.
4. Census of India, 1971, Portraits of Population.
5. Saxena, M. B, 1971, Indian Population in Transition, pp. 154-158, based on 1961 Census.
6. Census of India, 1971, U.P., Part I-A, General Report, p. 258.

In the absence of any direct evidence regarding the decadal migration except for 1951-61, demographers have tried to fill this gap by the methods of demographic calculations.¹¹ These estimates are presented in Table 4.9. Estimates for 1931-41 are not made as the figure relating to internal migration were not collected except for a few states. Figures of 1951-61 are based on Census counts.

Table 4.9 : Decadal Net Migration in U.P : 1901-61

Decades	Total population ('000)	Net migrants ('000)	Net migrants as percentage of population
1901-11	48014	(-) 114	(-) 0.2
1911-21	46511	(-) 362	(-) 0.8
1921-31	49615	(-) 284	(-) 0.6
1931-41	56346	N.A.	N.A.
1941-51	63216	(-) 638	(-) 1.0
1951-61	73746	(-) 737	(-) 1.0

Source : 1. Zachariah, K.C. 1964, A Historical Study of Internal Migration in the Indian Subcontinent, 1901-31, Bombay, p. 175.
 2. Census of India, 1951, Paper No. 2 of 1954, New Delhi, Office of the Registrar General and Census Commissioner of India, p. 14.
 3. Saxena, G. B. 1971, Indian Population in Transition, New Delhi, pp. 144-145.

¹¹ Zacharia, K.C. has calculated internal migration for decades 1901-11 to 1921-31 by the use of residual method. Mr. S.P. Jain Census Actuary has made a rough estimate of internal migration based on the place of birth statistics for the decade 1941-51 after excluding the count of displaced persons, neglecting the muslim-out-migration to Pakistan.

It is observed that U.P. has lost its population almost in all decades including 1941-51 after ignoring the displaced persons from Pakistan and muslim out-migration to that country. In absolute numbers, the volume of net out-migration has increased by more than six times in 1961, over 1911. In the decade 1901-11, the negative balance of net migration was 114 thousands persons which has risen to 737 thousands in 1951-61.

In 1961, in-migrants to the State from all other states and union territory of Delhi made 1.5 per cent while the out-migrants to these places 3.5 per cent of the total population (Table 4.10). It left a negative balance of 2 per cent of the total population of the State. The highest number of in-migrants to the State come from Punjab (322 thousands) followed by Bihar (227 thousands), Madhya Pradesh (223 thousands), Rajasthan (124 thousands) and the lowest from Orissa (about 3 thousands). Among out-migrants the highest number went to Madhya Pradesh (478 thousands) followed by Maharashtra (421 thousands), Delhi (419 thousands), West Bengal (347 thousands), Bihar (303 thousands), Punjab (286 thousands), Rajasthan (145 thousands) and lowest to Kerala (1 thousand). In-migration due to marriage seems prominent from Bihar, Madhya Pradesh, Rajasthan and Delhi as female in-migrants from these States exceed males while out-migration due to marriage is prominent to Bihar, Madhya

Table 4.10 : Inter-state Streams of All Time Migration in U.P., 1961

States	In-migration		Out-migration		Net Balance of Migration	
	P	M	P	M	P	M
Andhra Pradesh	5.8	3.6	2.2	11.1	7.5	3.6
Assam	7.5	5.0	2.5	40.7	30.9	9.8
Bihar	226.9	60.5	166.4	303.1	133.3	169.8
Gujarat	10.9	5.6	5.3	83.3	61.5	21.8
Jammu and Kashmir	8.7	5.5	3.2	3.8	2.6	1.2
Kerala	5.6	4.3	1.3	1.0	0.7	0.3
Madhya Pradesh	223.1	55.6	167.5	478.5	222.6	255.9
Madras	10.7	6.5	4.2	4.1	2.6	1.5
Maharashtra	23.8	13.3	10.5	420.7	343.9	76.8
Mysore	3.1	2.1	1.0	4.9	3.3	1.6
Orissa	2.6	1.7	0.9	10.2	7.8	2.4
Punjab	322.2	161.1	161.1	266.5	148.8	137.7
Rajasthan	124.1	35.5	89.6	144.9	53.2	91.7
West Bengal	61.1	28.5	31.6	346.9	263.9	83.0
Delhi	57.8	21.4	36.4	419.0	263.6	155.4
TOTAL	1092.9	410.3	682.6	2558.7	1546.2	1012.5
Per cent of total population	1.5	1.1	1.9	3.5	4.0	2.9

Note : In-migrants and out-migrants of all durations to and from all States and Delhi are included and to and from other Union territories are excluded.

Source : Saxena, G.B., 1971, Indian Population in Transition, New Delhi, Chapter 8, Table 1, pp. 154-158.

(in '000)

(-) 1135.9 (--) 329.9

(-) 5.3 (--) 3.9 (--) 3.9

(-) 33.2 (--) 25.8 (--) 25.8

(-) 76.2 (--) 72.8 (--) 72.8

(-) 72.4 (--) 55.9 (--) 55.9

(+) 4.9 (--) 2.9 (--) 2.9

(+) 4.6 (--) 3.6 (--) 3.6

(+) 4.6 (--) 167.0 (--) 167.0

(+) 255.4 (--) 167.0 (--) 167.0

(+) 6.6 (--) 3.9 (--) 3.9

(+) 6.6 (--) 330.5 (--) 330.5

(+) 396.9 (--) 1.3 (--) 1.3

(+) 1.6 (--) 7.6 (--) 7.6

(+) 2.4 (--) 35.7 (--) 35.7

(+) 137.7 (--) 20.8 (--) 20.8

(+) 91.7 (--) 286.8 (--) 286.8

(+) 20.8 (--) 361.2 (--) 361.2

(+) 242.2 (--) 242.2 (--) 242.2

(+) 119.0 (--) 119.0 (--) 119.0

Pradesh and Rajasthan. In-migration of males from Punjab is highest due to the settlement of displaced persons in the State.

4.4 Migration in Kumaon

Owing to its peculiar geographical setting, Kumaon has some distinct characteristic features, which have some definite and direct bearings on mobility of human beings living in the area. To assess the effects of these factors on mobility a brief look towards past would not be out of place before we come to the migration study of the region.

4.4.1 Background

Kumaon has been separated from rest of the country by the natural barrier to the mobility of human beings. The isolation of the region is partially broken by the construction of roads and railways in recent past. Within the region also, dearth of proper and well maintained roads poses problems for human movements, though conditions have steadily improved over the last hundred years.

Kumaon was ruled by the Hindu kings who had migrated to the region from the Indo-Gangetic plain from fourth to the middle of eighteenth century. Prior to this, kin oriented tribal democracy of the Khasa having no central

authority, existed there. The Khasa were non-Hindu herds-men and primitive agriculturists without any caste and class distinction. In the process of hinduisation, the social and political system which emerged during the Katyuris (fourth to eleventh centuries) and the Chand clans (till 1795) was while highly beneficial and conducive to the interests of in-migrant Hindus - mostly the Brahmins and the Rajputs, at the same time, it was highly exploitative and derogatory for the native Khasi and the Dom (Scheduled Castes). In the social hierarchy, they were placed below the in-migrant Brahmins and Rajput, while occupationally they were reduced to the status of tenants, serfs and slaves. Caste system was characterised by the convergence of wealth, political power and high rank which were controlled by in-migrant hindus. Religious office under Chauthani (high caste in-migrant Brahmin) was linked to political office, as a result, he became more powerful than king in so many respects. Land owners coming from higher caste ruthlessly exploited their tenants, slaves and servants. They were paid pitiful wages, and they were in addition required to give gifts to their masters on certain ritual occasions. The tenants, slaves and servants were also exploited by local officials and commanders of the

Raja's army.¹² Formal education was sole prerogative of the in-migrant Brahmins who kept the art of reading and writing to themselves.¹³ The Gurkhas effected a few radical changes in social and economic system of Kumaon during their brief regime from 1795 to 1815. The major development that took place during the subsequent 132 years of British rule includes ending of physical and social isolation of Kumaon by improved communication and administrative network, abolition of concession to tenurors, tendency to confirm ownership of land on actual tillers, abolition of the post of Dharmadhikari, lifting of restrictions on occupational mobility, abolition of slavery, opening of educational facilities and government jobs to every-one who has the ability and necessary qualification to obtain them etc.

In pre-British Kumaon, migration to and from the region involved risking of life and loss of native status due to its geographical isolation and political insularity. So in-migrants to Kumaon were compelled to be absorbed into the social structure, they evolved for themselves in the

¹² Srinivas, M.N. (1976) : Forward to Social Stratification in Rural Kumaon by R.D. Sanwal, Oxford University Press, p.VIII.

¹³ Fisher (Capt.), (1886) : Notes and Statements Regarding the Prevailing Castes - Kumaon, in Census of N.W. Provinces (1881), W.C. Plowden, Camptor, Allahabad Govt. Press.

region. But the privileges and position they enjoyed were more than sufficient to compensate the loss they suffered.

Geographical and socio-psychological isolation prevented any significant out-migration from the region till the emergence of British rule in the region. A good deal of in-migration which took place in the region, during the period of Hindu kings, was motivated either by the push of compelling circumstances created by Muslim rule in Indo-Gangetic plain, or by the very high pull of getting royal patronage and privileges in Kumaon, or by the highly obsessed missionary zeal for preaching Hinduism. A large number of persons from plain area continued to arrive in Kumaon till the closing phase of Chand rule. No major movements of people are known to have take place after the eighteenth century when the tarai passed out of Chand control,¹⁴ and subsequently after the ban imposed on settlement of non-Kumaonies in Kumaon by early British administrators in nineteenth century.¹⁵ According to the Census of 1872, the population of different castes was as follows:¹⁶

¹⁴ Sanwal, R.D. (1976) : Social Stratification in Rural Kumaon, Oxford University Press, p. 37.

¹⁵ Barron, P. (1844) : Pilgrims' Wanderings in the Himalaya, Agra.

¹⁶ Sanwal, R.D. op. cit. pp. 38-39.

In-migrant Brahmin (Bhal Baman)	3 per cent
Khasi Brahmin	22 per cent
In-migrant Rajput (Thakur Rajput)	11 per cent
Khasi Rajput (Khasi Jimdar)	29 per cent
Dom	23 per cent

(Percentages calculated by Sanwal from the figures quoted by Atkinson).

Prior to British rule, no major and regular movements of people outside the region are reported except the seasonal migration to Bhabars in winters and Bhotia semi-nomadism, which too were mainly confined within the region. Some stray examples of people leaving the regions, in earlier periods, come into notice. For example, the oppressive rule of Gurkhas drove away many high caste Brahmins and Thakurs who enjoyed hereditary privileges in the Chand administration. Similarly, many high caste individuals deprived of their monopoly over the highly regarded positions of political and economic power emigrated to other parts of the British India.¹⁷ These are the instances of political migration pertaining to the upper strata of the society. Migration outside, from common stock in mass scale comes into evidence only when in 1917, when a unit

¹⁷ Ibid, pp. 122 and 145.

of army 'Kumaon Rifle' was created in which only Kumaonies were recruited and two labour corps were raised during second World War to send to France and Mesopotamia. Recruits in both of them came mostly from Khasi Jimdar ranks. Scheduled Caste came in good number in the beginning but later they abstained as they earned better locally as builders and masons.¹⁸

During the same period, 'enclosed' forest policy of Government rendered the spatial extention of agriculture difficult.¹⁹ Consequently, demand for non-agrarian jobs increased, which in turn increased demand for schools and education. Since the opportunity for jobs in Kumaon, were limited educated persons migrated outside the region in search of employment. The persons to benefit most from these schools were lower castes of native stock.²⁰

Establishment of summer capital of United Provinces at Nainital attracted a good lot of educated youths towards white collar jobs and others towards fourth class jobs in

¹⁸ Government United Provinces (1925) : District Gazetteers of the Provinces of Agra and Oudh - Supplementary Notes and Statistics, Vol. 34, Allahabad Government Press, pp. 16-18.

¹⁹ Sanwal, R.D., op. cit. p. 195.

²⁰ Walton, H.G. (1911) : Almora : A Gazetteer, Allahabad Government Press, pp. 58 and 110, and Government of United Provinces, (1925) : op. cit. p. 16.

Government offices. Retired military persons returned to the area with new ideas and practices, provided impetus to youths to join army. Moreover, mechanised transport services made the opening for larger streams of migration.

4.4.2 Bhotia Semi-nomadism, and Seasonal/Periodic Migration to Bhabar

Two distinct and independent, major movement of populace characterised the migration in Kumaon till recent past. Semi-nomadism in Himalaya conformed in certain respect to the nomadism of mountain communities of the Balkans, Alps, Carpathians, Pyrenees, Andes and Tian Shan. A Gazetteer of United Provinces narrates, "As the winter advances the upper parts of Bhot - the region lying chiefly behind the snows and inhabited by Bhotias - become deserted. By the middle of November higher valleys are buried in snow and inhabitants, having completed their commerce with Tibet begin to move southwards. Camps are established at convenient points and here the women and children remain with their flocks and herds, other than pack animals, and the bulk of Tibetan merchandise. The men begin to make their journey to the submontane marts a journey to be repeated several times before the whole of the goods have been transported. These traffickings

continue about the middle of May when all the traders with their wives and children return to their homes near the great passes for the summer during which period they conduct their trade with Tibet".²¹ S.D. Pant gives the following schedule of movements.²²

April - May	: First upward trip of traders (Dhakarias) with goats and mules
May - June	: Traders second trip
Mid June	: Families with Jibus (member of Tibetan Yak family) etc.
Mid September	: First downward trip
End of September	: Second downward trip
October	: Families descend

In addition to Bhotias, Taklakote based Khambas of Tibet used to migrate to lower valleys of Kumaon during winters. Unlike Bhotias, they were always accompanied by their females and children. They used to disperse throughout Kumaon from Dharchulla to Ramnagar mainly to sell Jambu (a kind of scented grass used as spice) and other herbs in exchange for cash or grains.

²¹Walton, H.G. (1911) : op. cit. p.82.

²²Pant, S.D. (1935) : op. cit. p.51.

Another type of seasonal/periodic mass movement from some parts of Kumaon has been taking place to Bhabars during winter due to climatic and economic reasons. On this migration S.D. Pant observes, "between November and March the cold in the hills is severe and heavy snow falls. All the vegetation dies, and it is very difficult to feed the cattle. Moreover, the winter months are months of agricultural idleness, when every hillman seeks employment. The people are comparatively poor at this time of year, and the cost of living on the hills increases on account of intense cold. In order to solve their difficulties the hillman seek a more congenial climate, where besides "eating sunshine", they may expect some prospects of trade, or profitable employment, and inexpensive living. These, they find in Bhabars to which they all migrate for the winter. The men of the middle and northern parts of hills and especially of Palipachau, Kali Kumaon and Phaldakote, vacate their hill villages immediately after the Kharif harvest is completed, and march-down to the Bhabars, accompanied by their families and their cattle and live in straw - thatched huts amidst the forest clearings".²³ As a

²³Ibid, pp.175-176.

result of this exodus from hill pattiess, "whole villages are emptied of all their able bodied inhabitants, as in Riuni, for instance the total cold weather population consists of one or two descrepit men left to guard the property of the absentees".²⁴ On the contrary, "the Bhabars becomes fairly thickly populated".....till peoples" returning to the hills again after the rabi harvest and the bursting of the Shisham buds in March and April".²⁵ "There are four distinct classes among the people who migrate to the Bhabar. They are : Ghamtappas (Eaters of sunshine) or temporary residents, who work as daily labourers; nomadic cattle breeders, and ghi (clarified butter) producers; agriculturists and traders".²⁶ Moreover, "the winter is the period when the hillman pays his visit to Bhabar markets for his years supply of salt, sugar, iron and cloth".²⁷

As a result of these movements to Tarai and Bhabar region, the percentage of district born population in Nainital was only 55.7 per cent according to the returns of regular Census even before the Census of 1911. 41.8

²⁴ Walton, H.G. (1911) : op. cit, p.83.

²⁵ Nevill, H.R. (1904) : Nainital a Gazetteer, Vol. XXXIV, District Gazetteers of United Provinces of Agra and Oudh, p.97.

²⁶ Pant, S.D. (1935) : op. cit, p.138.

²⁷ Walton, H.G. (1911) : op. cit, p.83.

per cent recorded a birth place in the adjoining districts while 2.3 per cent came from other parts of India. This migration was not only the contribution of hill districts but the southern villages of Tarai recruited a large number of individuals from the adjoining districts of Rohilkhand also.²⁸

The magnitude of these two movements may be assessed from the returns of primary and general Censuses of Kumaon hills for some decades (Table 4.11).

In Almora, 36045 (7.2 per cent) persons were short in March, 1901 out of the returns of autumn 1900. Shortage of 17285 (28.3 per cent) persons was accounted for by the hill patties of district Nainital. Contrary to this, 47408 (9.9 per cent) persons increased in March, 1911 over the numbers of October, 1910, while the trend of 1901 persisted in hill patties of Nainital with the shortage of 11.8 per cent. The reason behind this was a scar of plague which probably drove many from the Bhabars into Almora before the Census took place.²⁹ Many of Nainital hill agriculturists might have stayed on due to non-maturity of crops. Again in 1931, population was deficient in comparison to preliminary Census of October 1930 by

²⁸ Nevill, H.R. (1904) : op. cit.

²⁹ Census of India, 1911, Vol. XV, United Provinces of Agra and Oudh, Part I - Report, p.78.

Table 4.11 : Returns of Primary and General Censuses
of Hill Portion of Kumaon

Census	Period	Almora	Nainital Hills
<u>1901</u>			
Preliminary	Autumn, 1900	5,01,938	61,023
General	March, 1901	4,65,893	43,738
Difference		(-) 36,045 (7.2)	(-) 17,285 (28.3)
<u>1911</u>			
Preliminary	October, 1910	4,77,696	66,501
General	March, 1911	5,25,104	58,631
Difference		(+) 47,408 (9.9)	(-) 7,870 (11.8)
<u>1931</u>			
Preliminary	October, 1930	P 6,11,657 M 3,11,629 F 3,00,028	66,738 35,548 31,190
General	February, 1931	P 5,83,302 M 2,92,004 F 2,91,298	54,223 29,439 24,784
Difference		P (-) 28,355 (4.6) M (-) 19,625 (3.4) F (-) 8,730 (1.5)	(-) 12,515 (18.7) (-) 6,109 (9.1) (-) 6,406 (9.6)

Note : Figures in parenthesis denote percentages.

Source : 1. Census of India, 1901, Vol.XVI, North-West
Provinces and Oudh, Part I - Report.
2. Census of India, 1911, Vol.XV, United Provinces
of Agra and Oudh, Part I - Report, p.46.
3. Census of India, 1931, United Provinces of
Agra and Oudh, Vol.XVIII, Part I - Report.

4.6 and 18.7 per cent in Almora and hill patties of Nainital respectively. It is worth noting that out-migrants from Nainital hills both men and women were found in almost equal numbers while out-migrants from Almora outnumbered women by over a hundred per cent. It can be inferred that migrants from Nainital hill patties were mostly agriculturists having their dwelling houses in Bhabars while most of the Almora migrants belonged to the group of nomadic cattle breeders and daily wage earners. With the onset of new culture from the plains periodic movements towards Bhabars have a decreasing tendency.

After Chinese intrusion in 1962 into the Indian territory and subsequent closure of border for trade with Tibet, Bhotia semi-nomadism has come to a halt and these semi-nomads have settled at one or other locations permanently. Similarly, rehabilitation and colonisation of tarai being over and with the eradication of malaria most of the seasonal migrants to Bhabars have either permanently settled in Bhabars or left moving seasonally. However, periodic movements from hilly Kumaon to Nainital plains have declined very sharply.

4.4.3 Extent and Nature of Migration in Kumaon

The proportion of migrants in total population of Kumaon was fairly larger, as the proportion of these enumerated at the place of birth is relatively lower (59 per cent), than State average (75 per cent) in 1971 (Table 4.12). Thus one-fourth of the population of Uttar Pradesh was migrant but this proportion for Kumaon was as high as 40 per cent. Among the districts, half of the population of Nainital and one-third of the population of Almora and Pithoragarh is migrant. As compared to State average, ratio of male migrants in the total migrants is larger, they constituted one-third of the total while they were only one-fifth of the total migrants in the State. Proportions of migrants distributed between rural and urban areas show similar pattern in Kumaon and U.P. About 83 per cent of the migrants have arrived at rural areas and remaining 17 per cent at urban areas in both U.P. and Kumaon. The higher proportion of males among migrants in the region denote that rate of migration for economic reasons is higher in Kumaon as compared to all other regions of the State.

In spite of the fact that the highest proportion of inter-state migrants and migrants from across the international boundary in the State are settled in the tarai

Table 4.12 : Percentage Distribution of Population by Place of Birth in Kumaon and U.P. in 1961 and 1971

			Place of Birth				Total
			Place of enumeration	Elsewhere in the district of enumeration	Other district of the State	Outside State & country	
Almora	P	1961	65.9	29.7	3.2	1.2	100.00
		1971	66.7	27.9	3.6	1.8	100.00
	M	1961	87.6	8.4	2.4	1.6	100.00
		1971	88.8	7.6	2.2	1.4	100.00
	F	1961	45.8	49.5	4.0	0.7	100.00
		1971	46.4	46.7	4.9	2.0	100.00
Pithoragarh	P	1961	65.9	28.0	3.0	3.1	100.00
		1971	67.0	26.7	4.0	2.3	100.00
	M	1961	86.2	8.3	2.3	3.2	100.00
		1971	84.9	8.7	4.3	2.1	100.00
	F	1961	46.7	46.5	3.9	2.9	100.00
		1971	49.5	44.0	3.7	2.8	100.00
Nainital	P	1961	37.4	13.7	33.1	15.8	100.00
		1971	49.5	15.5	24.3	10.7	100.00
	M	1961	38.7	9.3	34.8	17.2	100.00
		1971	57.1	10.5	23.0	9.4	100.00
	F	1961	35.5	20.2	30.6	13.7	100.00
		1971	39.9	21.8	26.0	12.3	100.00
Kumaon	P	1961	54.8	23.2	14.8	7.2	100.00
		1971	59.5	22.2	12.4	5.9	100.00
	M	1961	66.1	8.8	16.5	8.6	100.00
		1971	73.6	9.1	12.1	5.2	100.00
	F	1961	42.5	38.9	13.0	5.6	100.00
		1971	44.4	36.5	12.9	6.2	100.00
U.P.	P	1961	70.0	19.7	8.0	2.2	100.00
		1971	75.1	16.1	6.8	2.0	100.00
	M	1961	87.8	6.2	4.1	1.9	100.00
		1971	90.6	4.6	3.4	1.4	100.00
	F	1961	50.4	34.8	12.0	2.8	100.00
		1971	57.2	29.4	10.8	2.6	100.00

Source : Census of India, 1961, U.P., Part II-C(iii), Cultural and Migration Tables.

area of the region, majority of migrants are intra-regional in character. Intra-district migrants in the region account for 55 per cent of total migrants followed by 31 per cent by inter-district and 6 per cent from outside the State. Regional figure of inter-district migrants is inflated by the figure of district Nainital which accounts for one-fourth of the total migrants in the district and is four times the State figure. About two fifth of the inter-district migrants in the district of Nainital hail from neighbouring Almora alone.³⁰ In two purely hilly districts of the region i.e. Almora and Pithoragarh, migration from across the district boundaries is merely 5-6 per cent of their total population as against the 9 per cent of State average. Among foreign born, Nepalese and Tibetans are prominent.

The chief magnets to the migrants are the foothill markets and tarai area of the region which have highly fertile agricultural lands and densely wooded commercial forests with vast potentialities for employment generation. Due to this speciality of the area the magnitude of

³⁰ According to 1961 Census, out of 188 thousands persons born in other districts of U.P. and enumerated in Nainital 72 thousand persons were Almora born (Census of India, 1961, U.P., General Report, Part I-A(i)).

migration to the region has been very large since long-back but with two different characteristics. During the pre-independence era, it was mainly spontaneous and purely seasonal migration during winters. But in post-independence era, it is induced and permanent in nature. It is rather a government sponsored migration which was arranged to rehabilitate the displaced persons from Pakistan and Bangladesh, ex-servicemen, freedom fighters etc. To arrange this migration, a vigorous programme of rehabilitation was launched by deforestation and eradication of malaria. As a result, terai remained no more indomitable and number of activities, other than agricultural and forest based cropped up there. These activities coupled with developmental activities attracted further migrants to the area. Volume of migration in 1971 has shown a declining trend over 1961 in the region as it has been witnessed in the country as a whole. In the district of Nainital, proportion of migrants in total population in 1971, has come down to 50 per cent from 63 per cent in 1961, while the decrease is negligible in other two districts of the region. It is interesting to note that intra-district movements in the district of Nainital has shown an increasing trend in 1971 while inter-district and inter-state movements have registered a decrease but the trends though very nominal, is just reverse

in two other districts of the region. It construes that the opportunities in Nainital for those coming from outside the district are gradually waning but inflow from outside the district in Almora and Pithoragarh is maintained due to the construction works and expansion in services.

The pattern of migration streams in Kumaon is similar to that in U.P. and India except a proportionately higher inter-State rural to rural inflow in Kumaon. In inter-State movements those arriving at urban centres assume greater proportions but the percentage of those arriving at urban places in Kumaon is only 20 as against 42 per cent in U.P. in 1971 (Table 4.13). Rehabilitation of displaced persons and others in tarai region is mainly responsible for this phenomenon. It may lead to erroneous conclusions to generalise the divisional figures for the region as a whole. The figures of Nainital plains which constitute the small part of the region, have greatly biased the regional figures, when we look at the districts the position becomes clear. In both the decades (1951-61 and 1961-71), the proportion of rural to rural migrants has sharply came down in Almora and Pithoragarh districts. But in Nainital, though the proportion of inter-district rural to rural migrants is lower than their intra-district counterparts

Table 4.13 : Migration Streams in the Kumaon and U.P. :
1961 and 1971

	Rural to		Rural to		Urban to		Urban to		TOTAL			
	Rural	Urban	Urban	Rural	Rural	Urban	Urban	1961	1971	1961	1971	
	1961	1971	1961	1971	1961	1971	1961	1971	1961	1971	9	10
	0	1	2	3	4	5	6	7	8	9	10	
<u>Almora</u>												
Intra-district	P	95.1	93.2	4.2	5.3	0.4	1.1	0.3	0.5	100.0	100.0	
	M	74.2	71.2	23.4	24.4	1.4	1.9	1.1	1.9	100.0	100.0	
	F	98.4	96.5	1.3	2.2	0.2	1.0	0.1	0.3	100.0	100.0	
Inter-district	P	68.0	63.6	14.5	17.0	5.7	7.6	12.9	11.8	100.0	100.0	
	M	44.1	26.5	29.4	39.2	9.1	12.9	17.3	21.3	100.0	100.0	
	F	79.7	78.2	7.2	8.2	4.0	5.6	9.3	8.0	100.0	100.0	
Inter-State	P	22.1	20.7	41.7	32.3	19.3	25.4	16.9	21.6	100.0	100.0	
	M	25.8	28.8	49.1	40.2	12.9	18.9	12.2	12.1	100.0	100.0	
	F	11.0	4.3	19.8	16.4	38.5	38.6	30.8	40.7	100.0	100.0	
All Movements	P	91.2	88.5	5.9	7.0	1.2	2.3	1.7	2.2	100.0	100.0	
	M	64.6	59.4	26.5	28.9	3.8	5.3	5.1	6.4	100.0	100.0	
	F	96.4	94.1	1.8	2.9	0.7	1.7	1.0	1.3	100.0	100.0	
<u>Pithoragarh</u>												
Intra-district	P	100.0	91.3	-	4.1	-	4.5	-	0.1	100.0	100.0	
	M	100.0	82.5	-	12.4	-	4.6	-	0.4	100.0	100.0	
	F	100.0	93.0	-	2.5	-	4.5	-	Neg	100.0	100.0	
Inter-district	P	86.1	62.5	-	13.6	13.9	13.6	-	10.3	100.0	100.0	
	M	76.6	47.6	-	19.0	23.4	22.7	-	10.6	100.0	100.0	
	F	90.6	76.9	-	8.3	9.4	4.8	-	10.0	100.0	100.0	
Inter-State	P	40.9	25.4	-	2.6	59.1	59.6	-	12.4	100.0	100.0	
	M	50.0	36.6	-	2.3	50.0	51.1	-	13.0	100.0	100.0	
	F	18.5	8.1	-	3.2	81.5	77.4	-	11.3	100.0	100.0	
All Movements	P	98.0	86.2	-	5.3	2.0	6.8	-	1.7	100.0	100.0	
	M	93.4	60.3	-	12.1	6.6	23.9	-	3.6	100.0	100.0	
	F	98.9	91.0	-	3.0	1.1	5.1	-	1.0	100.0	100.0	
<u>Nainital</u>												
Intra-district	P	87.0	85.3	5.5	5.8	3.0	4.1	4.4	4.7	100.0	100.0	
	M	81.7	78.4	7.8	8.7	5.2	6.5	5.2	6.4	100.0	100.0	
	F	90.3	89.6	4.1	4.0	1.6	2.7	3.9	3.7	100.0	100.0	
Inter-district	P	72.3	61.3	14.8	19.4	3.9	6.3	9.0	13.1	100.0	100.0	
	M	73.3	60.4	14.6	21.8	4.2	4.9	7.8	12.9	100.0	100.0	
	F	70.6	62.2	14.9	16.7	3.5	7.8	10.9	13.3	100.0	100.0	

Contd.../-

Table 4.13 Contd.

	0	1	2	3	4	5	6	7	8	9	10
Inter-State	P	81.1	75.2	6.0	6.1	6.3	8.9	6.6	9.9	100.0	100.0
	M	82.5	72.0	5.8	8.1	5.8	9.7	5.8	10.1	100.0	100.0
	F	78.7	78.0	6.3	4.2	7.1	8.1	7.9	9.6	100.0	100.0
All Movements	P	77.1	71.1	11.4	13.2	4.0	5.8	7.5	9.9	100.0	100.0
	M	75.9	66.7	12.3	16.5	4.6	5.9	7.1	10.8	100.0	100.0
	F	78.5	75.0	10.2	10.2	3.2	5.7	8.1	9.0	100.0	100.0
<u>Kumaon</u>											
Intra-district	P	94.3	90.5	3.6	5.2	0.9	2.7	1.2	1.6	100.0	100.0
	M	81.8	77.3	12.5	14.6	2.8	4.1	2.8	3.9	100.0	100.0
	F	97.3	94.0	1.5	2.7	0.4	2.3	0.8	1.0	100.0	100.0
Inter-district	P	72.4	61.6	14.2	18.8	4.4	6.8	9.0	12.8	100.0	100.0
	M	71.9	57.4	15.2	22.8	4.7	6.4	8.2	13.5	100.0	100.0
	F	73.1	65.7	12.9	14.8	4.0	7.3	10.0	12.3	100.0	100.0
Inter-State	P	74.4	67.8	9.2	8.5	9.0	12.5	7.4	11.2	100.0	100.0
	M	75.3	64.1	10.5	11.7	7.9	13.4	6.3	10.8	100.0	100.0
	F	72.9	71.5	7.1	5.3	10.7	11.5	9.3	11.5	100.0	100.0
All Movements	P	85.0	79.3	7.8	9.9	2.7	4.7	4.4	6.0	100.0	100.0
	M	75.4	65.8	13.8	18.5	4.5	6.2	6.3	9.4	100.0	100.0
	F	90.5	85.9	4.5	5.8	1.7	4.0	3.1	4.3	100.0	100.0
<u>Uttar Pradesh</u>											
Intra-district	P	89.9	87.5	5.8	7.0	2.2	3.9	2.0	1.7	100.0	100.0
	M	74.6	70.9	16.4	20.1	3.6	5.2	5.4	3.8	100.0	100.0
	F	92.9	90.4	3.7	4.6	1.9	3.6	1.4	1.3	100.0	100.0
Inter-district	P	68.9	64.5	17.2	17.3	3.0	5.0	10.9	13.2	100.0	100.0
	M	43.6	36.3	34.3	35.8	3.6	5.3	18.6	22.5	100.0	100.0
	F	78.7	74.5	10.6	10.8	2.8	4.8	7.9	9.9	100.0	100.0
Inter-State	P	50.2	48.1	19.8	17.9	5.5	9.8	24.5	24.2	100.0	100.0
	M	31.9	31.9	30.0	28.9	6.0	8.6	32.1	30.5	100.0	100.0
	F	61.3	57.0	13.7	11.7	5.2	10.5	19.9	20.7	100.0	100.0
All Movements	P	82.1	78.8	9.7	10.5	2.6	4.5	5.6	6.2	100.0	100.0
	M	59.1	53.7	24.2	27.0	3.8	5.6	12.8	13.7	100.0	100.0
	F	88.1	84.8	5.8	6.5	2.3	4.3	3.7	4.4	100.0	100.0

Note : There was no urban area in District Pithoragarh in 1961.

Source : 1. Census of India, 1961, Vol. XV, U.P., Part-II-C(III),
Cultural and Migration Tables.

2. Census of India, 1971, Series 21, Part II-D(i),
Migration Tables.

but not as lower as in the former districts. Contrary to general trends, the proportion of inter-state rural to rural migrants exceed the inter-district rural to rural migrants in Nainital. Since the migration in Nainital plains in post-independence era is not spontaneous and has not taken place in normal circumstances, it does not conform to the general pattern of migration.

4.4.4 In-migration in Kumaon

Kumaon is the region, where the degree of in-migration is highest among all regions of Uttar Pradesh. In-migration in Kumaon is marked by two extremely opposite characteristics. On the one hand, there are two purely hilly districts of the region where in-migration is smallest in the whole of the State, on the other, Nainital district of the region is marked by the highest in-migration in the State. The reasons for low in-migration in the former may be cited as has been stated in one of the Census reports that the inhabitants of plains object to the climate of the hills, and in addition there is nothing to attract them there.³¹ The preceding paras have thrown sufficient light as regards the highest in-migration in Nainital district.

³¹ Census of India, 1901, Vol. XVI, North West Provinces and Oudh, Part I, Report, p.39.

We find two distinct phases of in-migration in Kumaon and its districts. A declining trend was observed in proportion of in-migrants in the region upto 1951 (Table 4.14). After that we find the proportion of in-migrants in the

Table 4.14 : Percentage of In-migrants in Total Population in Kumaon, 1901-71

Census	Almora	Pithoragarh	Nainital	Kumaon
1901	3.2		44.3	19.8
1911	2.8	4.4	41.6	17.6
1921	1.7	3.0	39.0	14.6
1931	1.2	2.8	38.9	13.4
1951	1.9	2.4	39.6	13.3
1961	4.4	6.1	48.8	22.0
1971	5.4	6.3	35.0	18.1

Source : Reports of respective Censuses.

region has increased but with a tendency towards decline in 1971. The proportion of in-migrants in district Nainital in 1971 has declined by about 14 percentage points while there was a tendency towards slight increase in Almora and Pithoragarh districts. In-migration to a particular area is caused either by the creation of new opportunities in that area or by instability or abnormal situations prevailing

in other areas. In-migration in Kumaon presents a mixed picture of both the factors. Prior to British rule Hindu kings of Kumaon encouraged migration in the region by providing powers and privileges to in-migrants. Subsequently, early British commissioners imposed ban on the settlement of non-Kumaonies in the region,³² which might have caused decline in in-migration in the region (which reflects in Table 4.14 upto 1951). Again, after the partition of the country in 1947, and subsequent incidents in Indian sub-continent in-migration is encouraged in the region. By 1971, the opportunities for heavy in-migration in Nainital plains seem to have exhausted but the tendency towards increasing in-migration in two hilly districts of the region seems to be maintained due to the expansion in services and developmental works.

4.4.5 Out-migration from Kumaon

It has already been pointed out that the study of migration in India is constrained, to a large extent, by non-availability of appropriate and adequate statistical

³² Walton, H.G. (1911) : op. cit, pp.155-56, and also see, Pande, B.D. (1937) : Kumaon Ka Itihas (in Hindi), Almora, The Author, pp.484-485.

evidence. The problem becomes more complex when we study out-migration as there is no direct method to get the information as regards to the number of persons moved outside the place of birth from a particular areas. The only way to ascertain the number of out-migrants from an areas is to obtain the information from the Census returns of other areas as to what number of persons born in area under study are enumerated outside that area. This is a very cumbersome task to achieve. Some of our Censuses (1901-21) make available information regarding out-migrants upto district level but this information is also not complete as it does not include movements outside the country. In other Censuses (barring 1941), information regarding movement outside the State are available but if the area of study is smaller than the State as a whole, we are not in a position even to know the net results of out-migration from that area. Census of 1961 provides information regarding inter-district migration but it confines to the districts within the State only. Information regarding intra-district movements is available in 1961 and 1971 but it does not serve any purpose in the absence of complete information regarding the movement of population outside the state from a particular district. Hence it is very difficult to obtain the correct picture of out-migration from the Kumaon region on the basis of

secondary evidence. Nevertheless, we will attempt to ascertain the extent of out-migration and net-migration on the basis of available information and by examining some other demographic indicators.

Kumaon is the region which assimilates two extremely paradoxical characteristics as regards migration. According to evidences pertaining to all time migration, this is the region of the State which has received the highest proportions of in-migrants, as well as, has sent the highest proportions of out-migrants so far. We have already analysed the position of in-migration in the region. Now, we turn to examine the direct and indirect evidences related to out-migration from the region.

4.4.5.1 Age Sex-Composition of Population : We have already examined the age composition of population in Kumaon vis-a-vis U.P. and found that the trends over the decades are identical in both of them. The proportion of population in age group 0-14 years has increased from 1901 to 1971 while it has declined in the working age group 15-59 (Table 2.10). Population in age group 60 years and above has also witnessed increase. The increase or decrease is, particularly, significant during last three decades. To some extent, the increase in the proportion of population in various age groups may be attributable to decline in infant

mortality and general improvement in medical and health facilities. But the decline in the proportion of the population of working age groups is mainly explained by out-migration. Out-migration from working age groups also affects the composition of population in other age groups. Two purely hilly districts of Kumaon (Almora and Pithoragarh) are destined as loser of population in the balance of migration while Nainital figures among the gainers of population. Age composition of population in these districts amply supports these propositions. Prior to 1941-51, the proportion of population in 0-14 age group was nearly two-fifth in Almora and Pithoragarh while this proportion was barely one-third in Nainital district. In working ages (15-39) the proportion of population in Nainital was nearly two-third (61-65 per cent) while in Almora and Pithoragarh it ranged 55 to 56 per cent. Higher proportion of dependents in the latter denotes high age specific out-migration while lower proportion of dependents (below 40 per cent) in former denote high age specific in-migration. During last two decades (1951-71), the position regarding age composition in district Nainital has undergone a rapid change. The proportion of the population of working ages has come down and that of dependent age groups has gone up with faster rate. In 1971, the proportion of population

in different age groups in the district is found to be almost at par with two other purely hilly districts. It indicates that the margin of net decadal positive migration in the district has considerably come down, particularly, during 1961-71. A scrutiny of 1961 population in various age cohorts (of 10 years) reaching to next higher age cohorts in 1971, tends to support this observation (Appendix II).

The table reveals that 11 per cent of the population of 1961 Census in Kumaon did not see the Census of 1971, in the region. This loss is accounted for deaths and out-migration in the decade 1961-71. The proportion of loss in case of male population (12 per cent) is higher than female loss (10 per cent). The position in U.P. is just contrary in this respect as the female loss (13 per cent) predominates male loss (9 per cent). This denotes that marriages in Kumaon mostly confine within the region. The proportion of loss in population has, as usual, increased with advancing ages. The loss of population in lower age cohorts denotes the predominance of migration and in higher age cohorts that of mortality. As regards male population, loss in 10-19 years age cohorts is lowest (4 per cent). It goes upto 23 per cent in next two higher age cohorts (20-39) but comes down to 7 per cent

in age cohort 40-49 years. After this age cohort, it has risen at progressively faster rate. Generally, people migrate in the age group 20-39 to take outside employment. After this age they hardly migrate. Mortality overtakes age groups above 50. Degree of loss or gain as regards female population in the age cohorts between 40-49 years mainly depends on the number of marriages to and from outside the area and maternal mortality. Loss due to marriages is not very prominent in the region as the district Nainital gains female population in age cohorts of 10-19 and 20-29 years. Loss in female population in age cohorts above 40-49 years has increased at a faster rate. In all, 160 thousands population (89 thousands male and 71 thousands females) of 1961 population are lost during the decade 1961-71. The loss occurred due to deaths accounts for 36 thousands persons (2.2 per cent of 1971 population) and rest 124 thousand persons (8.4 per cent) are supposed to have migrated outside the region. Statistics of all time migration establish Kumaon as a region of positive net migration. This may be true in all time migration perspective but does not seem to hold good as regards the decadal position. The age statistics of 1961 population indicates that even the district of Nainital which is treated as a constant net gainer of population right from 1901 seems to have lost nearly 2 thousands of its population by migration during the decade 1961-71.

We have already analysed the pattern of sex composition in U.P. and Kumaon from 1901. We have noted that the proportions of males and females in the age group 0-14 are identical (males exceeding females) in both of them (Table 2.10). But in next higher age group (15-39) we find that the position is reversed in Kumaon 1951 onwards. But in Nainital sex-composition has remained highly unfavourable to female right from 1901. The persistently reverse trend in sex composition in a particular age group in favour of a particular sex may be caused either by age-sex selectivity of mortality or by the age-sex selectivity of migration. The possibility of the former from the former districts of the region is ruled out due to the high incidence of maternal deaths in the region (Table 4.15). During 1951-61 the ratio of female mortality (female death per 1000 of male death) in the age group 15-39 in the region was as high as 1075 as against 903 in Uttar Pradesh. The ratio of female mortality has been accounted as 1099 in Almora, 1071 in Pithoragarh and 1013 in Nainital. Higher proportion of females in the age group 15-39, in spite of high female mortality, implies a very high degree of male selective out-migration from the region. Our sample data confirms this hypothesis very clearly. In-migrant households proportion of females is found to be higher than males

Table 4.15 : Age Specific Sex Mortality Ratio
in Kumaon and U.P., 1951-60

Age groups	Female Deaths per 1000 of Male Deaths				
	Almora	Pithora-garh	Nainital	Kumaon	Uttar Pradesh
0 - 14	819	948	888	911	820
15 - 39	1099	1071	1013	1075	903
40 - 59	930	935	769	892	749
60 +	850	903	744	834	758

Note : Kumaon region's figures are based on the registered deaths during 1957-60.

Source : Census of India 1961, Vol. XV, U.P., Part I-B, Report on Vital Statistics, pp. 16-17 and 78-90.

by 12 per cent in all ages while the corresponding proportion in case of non-migrant household is lower by 3 per cent (Table 8.1). In migrants households, proportion of males (38 per cent) in ages 15-59 is remarkably lower than females (62 per cent) but in non-migrant households, composition of sexes between ages is either favourable to males or balanced except in the ages above 60.

4.4.5.2 Sex Ratio : An exceptionally high or low sex ratio suggests either highly differential mortality rates or very different migration patterns between men and women.

In general, a sex ratio (female to male per 1000) slightly short of 1000 is observed in most population groups. In Kumaon, as observed earlier (Table 2.12), the ratio was generally lower than in U.P. and India till 1941. In purely hilly districts of the region, it has been more than 1000 in all decades 1941 onwards. In Nainital district, sex ratio has been rather low, never reaching 900. Since there is no evidence of high male mortality (evidence available is contrary to this), in the hilly region, it is clearly an outcome of high degree of male selective out-migration. Our sample data confirms this hypothesis by indicating that sex ratio including out-migrants in total population comes to be 878 while it goes upto 1099 by excluding out-migrants from the total population (Table 8.1).

Age specific sex ratio (Table 4.16) repeats the same story as narrated by the age-sex composition of the population in the region. Prior to 1951, sex ratio in age groups 15-39 and 40-59 in the region was lower than U.P. but 1951 onward it not only superseded U.P. but also rose above unity in age group 15-39. In next higher age group (40-59), it started rising in 1951 and achieved higher proportion than in U.P., in 1971. In the era of rising birth rates and declining mortality the rising sex-ratio in the region indicates that higher out-flow of population

Table 4.16 : Age Specific Sex, Ratio in Kumaon and U.P. (1901-1971)

Districts	Age group	C E N S U S E S					
		1901	1911	1921	1931	1951	1961
Almora	0 - 14	959	966	954	963	911	960
	15 - 39	999	1009	1096	1110	1239	1315
	40 - 59	914	906	942	890	872	1034
	60+	970	934	886	801	775	866
Pithoragarh	0 - 14	959	966	954	963	911	972
	15 - 39	999	1009	1096	1110	1239	1239
	40 - 59	914	906	942	890	872	1000
	60+	970	934	886	801	775	818
Nainital	0 - 14	806	877	857	870	883	899
	15 - 39	737	695	645	620	661	632
	40 - 59	812	725	673	675	577	577
	60+	1083	1005	863	811	790	691
Kumaon	0 - 14	901	934	923	935	903	939
	15 - 39	874	864	894	896	1010	953
	40 - 59	871	832	839	820	785	834
	60+	1002	954	880	803	778	799
U.P.	0 - 14	904	890	892	902	909	902
	15 - 39	932	914	905	903	896	929
	40 - 59	958	923	910	883	840	856
	60+	1165	1086	1053	1013	826	906

Note : 1. 1951 figures are based on sample data and are adjusted for the age groups 15-39 and 40-59 to maintain the uniformity of age groups.
 2. 1981 figures are awaited at the time of writing.
 3. 1941 figures were not tabulated due to war.

Source : Age Tables of Censuses, 1901 to 1971.

is gaining ground day by day. According to our sample data, in migrant households, sex-ratio is as high as 1283 while in non-migrant households it is as normal as 940. In the age groups 15-39 and 40-59, in migrants households, it comes to be 1658 and 1586 respectively. Sex ratio above unity in 0-14 age group points towards infant out-migration.

Having examined demographic indicators giving an idea about the extent of migration in indirect way, we now turn to different sets of statistics provided by our Censuses. The Censuses of 1901, 1911 and 1921 provide the figures of in, out and net migration. The figures upto district level were available but remained confined to the migration taking place within the national boundaries alone. The second set of statistics available belongs to inter-district migration confined within the state boundaries for the above mentioned Censuses along with the Censuses of 1961 and 1971.³³

4.4.5.3 All Time In, Out and Net Migration in Kumaon (1901-21) : Districtwise figures of in, out and net migration to and from the region are presented in Table 4.17. The

³³Figures for 1971 were not published but were compiled from the unpublished Census records.

Table 4.17 : Percentage All Time In, Out and Net Migration in Kumaon, 1901-21

	1901	1911	1921
<u>Almora and Pithoragarh</u>			
i. In-migration	3.2	2.8	1.8
ii. Out-migration	9.4	10.3	10.1
iii. Net migration	(-) 6.2	(-) 7.5	(-) 8.3
<u>Nainital</u>			
i. In-migration	44.3	41.6	39.0
ii. Out-migration	5.4	7.1	5.4
iii. Net migration	(+) 38.9	(+) 34.5	(+) 33.6
<u>Kumaon</u>			
i. In-migration	19.6	17.6	14.5
ii. Out-migration	7.8	9.0	8.5
iii. Net migration	(+) 11.8	(+) 8.6	(+) 6.0

Note : 1. (+) relates to net in-migration and (-) relates net out-migration.

2. Figures exclude overseas out-migration.

Source : 1. Census of India, 1901, Vol.XVI, B, North West Provinces and Oudh Part III - Provincial Tables and Appendices, 1902.
 2. Census of India, 1911, Vol.XVI, United Provinces of Agra and Oudh, Part II - Imperial Tables.
 3. Census of India, 1921, Vol.XV, United Provinces of Agra and Oudh.

table reveals that the districts of Almora and Pithoragarh have been the areas of constant net out-migration while the district Nainital has witnessed constant in-migration. Tarai and Bhabar belt of district Nainital, which consists of only 29 per cent area of the region, has quite a different geographical and other characteristics from rest of the region. Generally, the peculiarities of this belt bias the conclusions and generalisations that are made in the perspective of the region as a whole. The volume of in-migration in this small pockets of the region has been so heavy as to turn the region as whole in the area of net in-migration. In pre-independence period, as has already been noted, in-migration in the tarai of Nainital was purely seasonal in character and inter-districts in type mainly forthcoming from the neighbouring districts of Almora, Bareilly, Moradabad, Rampur and Bijnor. Almora was largest contributor to this migration. In-migration from outside the State was confined to 3 to 4 per cent only. A good number of persons having their land and dwelling houses in tarai as well as in neighbouring districts used to come and stay in tarai only in fair weather i.e., from November to mid March. Such bilocal people were also enumerated as migrants. Had the Censuses been not taking place in March the position regarding net in-migration would have been other-wise. However, the table reveals that net out-migration from Almora and

Pithoragarh witnessed increase while Nainital registered decrease in net in-migration, though positive, had decreased by 6 percentage points during three decades under reference.

4.4.5.4 All Time In, Out and Net Inter-District Migration in Kumaon (1901-71) : For the reasons mentioned earlier, figures relating to out-migration for three consecutive Censuses (1931-51) are not available. Figures for Censuses other than these are given in Table 4.18. Inter-district figures also confirm the constantly declining trend in in-migration in the region with slightly increasing in-migration in Almora and Pithoragarh and fastly decreasing in-migration in Nainital during 1951-61 and 1961-71. The comparison of Tables 4.17 and 4.18 indicates that out-migration from the region upto 1921 mainly remained confined within the State of U.P. In-migration in the region from outside the State has been higher than the out-migration from the region. As per available evidence³⁴ the substantial movement of the region's population outside the State started during the first world war when the units of Kumaon Rifles and Labour Corpse were sent outside the country, and most probably, they stayed their at the time of 1921 Census. Such movements upto 1921 and subsequent movements

³⁴ Government of U.P., District Gazetteer of United Provinces (1925) : op. cit, pp.16-17.

Table 4.18 : All Time In, Out and Net Inter-District
Migration in Kumaon in Some Decades

	C E N S U S S				
	1901	1911	1921	1961	1971
<u>Almora</u>					
In-migration	7308 (1.6)	6940 (1.3)	5741 (1.1)	20755 (3.3)	26963 (3.6)
Out-migration	43300 (9.3)	52559 (10.0)	50160 (9.5)	106525 (16.8)	97738 (13.0)
Net migration	(-) 35992 (-) (7.7)	(-) 45619 (-) (8.7)	(-) 44419 (-) (8.4)	(-) 85770 (-) (13.5)	(-) 70775 (-) (9.4)
<u>Pithoragarh</u>					
In-migration	I n c l u d e d		8268 (3.1)	12498 (4.0)	
Out-migration	i n		14246 (5.4)	33291 (10.6)	
Net migration	A l m o r a		(-) 5978 (-) (2.3)	(-) 20793 (-) (6.6)	
<u>Nainital</u>					
In-migration	127653 (41.0)	121800 (37.6)	97782 (35.3)	189714 (33.0)	192311 (24.3)
Out-migration	12386 (4.0)	19089 (5.9)	13990 (5.0)	45847 (8.0)	38061 (4.8)
Net migration	(+) 115267 (+) (37.0)	(+) 102711 (+) (31.7)	(+) 83792 (+) (30.3)	(+) 143867 (+) (25.0)	(+) 154250 (+) (19.5)
<u>Kumaon</u>					
In-migration	134961 (17.4)	128740 (15.2)	103523 (12.8)	218737 (14.9)	231772 (12.5)
Out-migration	55686 (7.2)	71548 (8.4)	64150 (7.9)	166618 (11.3)	169090 (9.1)
Net migration	(+) 79275 (+) (10.2)	(+) 57092 (+) (6.8)	(+) 39373 (+) (4.9)	(+) 52119 (+) (3.5)	(+) 62682 (+) (3.4)

Note : Figures in parenthesis denote percentages.

Source : 1. Reports of respective Censuses.
2. Unpublished data of 1971 Census.

even outside the State are not touched by our Censuses as the tabulation of out-migration figures could not be done at 1921 pattern afterwards. In the absence of adequate information regarding out-migration, a definite idea about net migration cannot be ascertained. In such a position, only guess-work, indirect methods of assessment (analysed in preceding paras) and sample studies can help the analysis. On the basis of certain assumptions, we suppose that out-migration from the region beyond U.P. would have increased by many times over 1921. Improvements in means of communication, in quantum and standard of literacy and increased knowledge about outer world would have raised people's aspirations for better quality of life and would have pushed them farther and farther successively. Moreover, decrease in nearby opportunities would have further contributed to this cause. Declining proportions of migrants going to contiguous districts and increasing proportion of those going to other (farther) districts over time confirms this proposition (Table 4.19). Proportion of recruitment in military and para military forces mostly stationed in remote borders and other places outside the State, has increased manyfold. According to one estimate 50 per cent of out-migrants from Kumaon and

Garhwal go to these forces.³⁵ In our own sample, the extent of out-migration was found to be 16 per cent of existing population and 14 per cent of the population inclusive of out-migrants. Male out-migrants amounted to a little less than one-third (29 per cent) of existing male population. Of the total out-migrants 28 per cent joined the armed forces and more than 24 per cent have gone outside the State. State capitals, industrial and metropolitan cities outside the State accommodate a sizeable portion of Kumaoni population. Most of the million cities in India have around 20,000 Kumaonies and Garhwalies on an average. Delhi is reported to have the population of a district from hill region of Uttar Pradesh.³⁶ City like Jaipur, not much prominent from employment point of view, had around 600 Kumaoni families during 1980-81. About 48 per cent of these families were living there for more than 11 years.³⁷ An another study on migration from U.P. hills indicates that the extent of out-migration from Pithoragarh district of the region was around 23 per cent of the total population which has taken away about 45 per cent of male

³⁵ Kumar, K., op. cit., p.140.

³⁶ Ibid.

³⁷ Upreti, H.C. (1981) : Social Organisation of a Migrant Group, Bombay, p.15.

workers out of the total male workers in the area. In the detailed analysis of one village of the sample, the study reveals that 54 per cent of total out-migrants have crossed the boundaries of the State (of whom 44 per cent have gone to Bombay and Delhi alone) and 23 per cent have joined the armed forces.³⁸ Under estimation of out-migrants is also feared by their visits to native place for family union during the festival of holi coinciding with the period of Census operations providing them a chance to be enumerated at the place of birth and to be omitted from the place of destination. Such underestimation is estimated to be around 25-50 per cent.³⁹ Similarly, in migration also has a fair chance of over-estimation by the native born children of in-migrants to be enumerated as in-migrants. These factors may raise the margin of in-migration and lower that of out-migration affecting the position of net migration.

The foregoing analysis suggests that net in-migration in the balance sheet of inter-district migration persists due to the rehabilitated cumulative migrants in the tarai of Nainital and higher proportion of out-migrants from

³⁸ Bora, R.S. (1987) : Migration from U.P. Hills and Its Consequences, Proceedings of the Seminar on Development and Change in Uttar Pradesh held in Giri Institute of Development Studies, March 27-29, 1987.

³⁹ Kumar, K., op. cit., p.140.

the region going outside the State in post-independence era being not recorded. By the exclusion of the rehabilitated persons from among the normal migrants, the region will emerge as an area of high net out-migration. In 1971, total in-migrants in the region are recorded as 18 per cent of total population and inter-district out-migration as 9 per cent. Net balance of migration in the region can be determined only when the number of out-migrants going beyond the State are ascertained. Now, net in or out-migration to or from the region depends on the answer to the question whether the proportion of out-migrants going beyond State's limits exceeds 9 per cent of the regions population or fall short of it. With the present trends of high out-migration from the region, particularly its hilly portion, as revealed by above mentioned studies, there exists every possibility of 9 per cent or even more of the region's population migrating beyond the boundaries of the State. Generalising the findings regarding the proportions of out-migrants of Bora's study for district of Pithoragarh and that of our sample for the Almora we find that 16 per cent and 6 per cent of estimated population for 1985 from Pithoragarh and Almora respectively, migrate outside the State. The proportion of total out-migrants from these districts are 23 and 16 per cent respectively. The combined proportion of migrants

going outside the State has been estimated as 10 per cent⁴⁰ of the population. According to an another estimate 20,000 persons of district Pithoragarh are serving in armed forces and another 12,000 have joined State Police and para-military forces.⁴¹ This comes to 6 per cent of the district's total estimated population for 1985. With such a high proportion of human plight from the hill areas of Kumaon, we can safely assume that more than 9 per cent of the regions population migrate outside the State. Age-sex composition of population, sex ratio and age cohort analysis of the later decades clearly tends to support this proposition. As regards the decadal balance of migration, there seems to be no doubt in assuming that Kumaon is a region of net out-migration at least during last two decades. If we keep aside the consideration across the political boundaries of the region and analyse the problem

⁴⁰ Allowing the margin for the force's personnel stationed within the State one-third of such migrants are excluded from the average. This margin is sufficiently high. Depending upon the movements of forces average may rise upto 16 per cent.

⁴¹ India To Day, Vol.XI, No.23, December 1-15, 1986, pp. 160-163.

from the view point of hilly Kumaon and its original inhabitants, we find that the proportion of out-migration from the region has considerably increased during this period.

4.4.5.5 Inter-district Out-migration by Distance : Most of the inter-district movements from the districts of the region are found to have taken place to nearby districts rather than the distant ones both in case of males and females (Table 4.19). The proportion of inter-district out-migrants in the contiguous districts from the districts of Kumaon (77 per cent) is higher than the State average (70 per cent) in 1961. The proportion of males among migrants from Kumaon is higher while the trends are just reverse in the case of State as a whole for the reason already mentioned earlier that migration from the region mainly occurs for employment purpose, while marriage migration predominates the other regions of the State. Migration to other districts of the State has, of course, been lower in earlier decades but it has a tendency towards increase in recent decades being highest from Pithoragarh (48 per cent) both in the case of males and females. Higher preference for the jobs in defence services and

Table 4.19 : Migration to Contiguous and Other Districts of the State, from Kumaon Region During some Decades

	To Contiguous Districts			To other districts			TOTAL		
	Male		Female	Total	Male	Female	Total	Male	Female
	0	1	2	3	4	5	6	7	8
Almora									
1911	N.A.	N.A.	49,000 (92.50)	N.A.	N.A.	4,000 (7.50)	N.A.	N.A.	53,000 (100.00)
1921	27,000 (54.00)	19,000 (38.00)	46,000 (92.00)	3,000 (6.00)	1,000 (2.00)	4,000 (8.00)	30,000 (60.00)	20,000 (40.00)	50,000 (100.00)
1931	45,602 (42.80)	40,636 (38.10)	86,238 (80.90)	12,143 (11.40)	8,144 (7.60)	20,287 (19.00)	57,745 (54.20)	48,780 (47.80)	1,06,525 (100.00)
Pithoragarh									
1961	3,836 (26.90)	3,587 (25.20)	7,423 (52.10)	3,666 (25.70)	3,157 (22.20)	6,823 (47.90)	7,502 (52.70)	6,744 (47.30)	14,246 (100.00)
Nainital									
1911	N.A.	N.A.	12,000 (63.20)	N.A.	N.A.	7,000 (36.80)	N.A.	N.A.	19,000 (100.00)

Contd./-

Table 4.19 Contd.

	0	1	2	3	4	5	6	7	8	9
1921	3,000	6,000 (42.40)	9,000 (64.30)	3,000 (21.40)	2,000 (14.30)	5,000 (35.70)	6,000 (42.90)	8,000 (57.10)	14,000 (100.00)	
1961	20,103 (43.80)	15,327 (33.40)	35,430 (77.30)	5,954 (13.00)	4,463 (9.70)	10,417 (22.70)	26,057 (56.80)	10,790 (43.20)	45,847 (100.00)	
<u>Kumaon</u>										
1911	N.A.	N.A.	61 (84.70)	N.A.	N.A.	11 (15.30)	N.A.	N.A.	N.A.	72 (100.00)
1921	30 (46.90)	25 (39.00)	55 (85.90)	6 (9.40)	3 (4.70)	9 (14.10)	36 (56.30)	28 (43.70)	64 (100.00)	
1961	69,541 (41.70)	59,550 (35.70)	1,29,091 (77.40)	21,763 (13.10)	15,764 (9.50)	37,527 (22.50)	91,304 (54.80)	75,314 (45.20)	1,66,618 (100.00)	
UP Average for 1961 (1akhs)	9.20 (23.10)	18.60 (46.90)	27.80 (70.00)	5.90 (14.90)	6.00 (15.10)	11.90 (30.00)	15.10 (38.00)	24.60 (62.00)	39.70 (100.00)	

Note : 1. N.A. = Not available

11. Almora includes Pithoragarh in 1911 and 1921.

Source : 1. Census of India, 1911, Vol.XVI, United Province of Agra and Oudh, Part II - Imperial Tables.

11. Census of India, 1921, Vol.XV, United Provinces of Agra and Oudh.

111. Census of India, 1961, U.P, Part I, A(1), General Report, pp.421-422.

settling down of a sizeable number of families from Pithoragarh district in the tarai of Nainital⁴² has contributed to this phenomenon. The increased proportion of migrants from Nainital to contiguous districts over-time, may be explained in terms of transfer of trade, skills and capital in the wake of development activities in comparatively backward neighbouring districts. The law of Ravenstein that "the great body of out-migrants only proceed a short distance",⁴³ seems to come true subject to the condition that the opportunities exist in nearby areas. Moreover, the intervening obstacles in the form of physical and socio-cultural distances are reduced due to the development activities in rural areas.⁴⁴ The increased propensity of out-migrants to go to farther areas tends to support this hypothesis.

⁴²Khanks, S.S. (1983) : op. cit, p.117.

⁴³Ravenstein, E.G. (1885) : The Laws of Migration, in the Journal of the Royal Statistical Society, 52(2), pp.167-224.

⁴⁴Rhoda, R.E. (1980) : Development Activities and Rural Urban Migration, in Development Digest, Vol.VIII, No.4, October 1980, p.7.

4.5 Conclusions

In the past, significant in-migration from the plains took place in the region during the rule of Hindu kings. The reasons behind in-migration were oppressive Muslim rule in Indo-Gangetic plains, allurement of royal patronage and privileges in the region and zealous obsession of preaching Hinduism etc. On the other hand, no significant movement of population outside the region, comes into notice in pre-British era.

Prior to British rule, two distinct type of movements of population in the form of winter exodus of hill population to Bhabars and Bhotia semi-nomadism were prevalent in the region, which remained effective during British rule and even in post-independence era till the Chinese aggression in 1962. These movements were purely seasonal in nature and remained confined mostly within the region.

Out-migration of a significant number of persons from the region comes into notice in the British period when geographical and political isolation was broken. Construction of rails and roads, and introduction of number of other measure like abolition of slavery, universalisation

of education and availability of government job encouraged the outwards movements from the region.

As regards extent of migration, not only out-migration from the region is significant, but in-migration in the region is also prominent. While high degree of out-migration are the speciality of Almora and Pithoragarh, Nainital received a large proportion of its population from outside the region under the tarai rehabilitation programme. Latest evidence shows that the region gains 18 per cent of its population by in-migration and loses 9 per cent of its population (both including intra-region migrants) to rest of Uttar Pradesh. The evidence regarding the loss by out-migration beyond U.P. is not available. But the trends of some sample studies and analysis of sex-ratio and age cohorts etc. indicate that the region loses more of its population than it gains. Age cohort analysis shows that the region faced a net loss of 8 per cent of its population by out-migration during 1961-71.

Since marriages are mostly confined within the region and its sub-regions, migration mostly takes place for economic and other reasons.

The evidence regarding distance shows that migrants prefer to move short distances subject to the availability of opportunities. In case nearby opportunities are exhausted they do not hesitate in moving farther. The proportion of those moving farther is on increase in recent times.

CHAPTER V

Socio-Economic Characteristics of Migrants

5.0 General Observations

Migration is a complex process. It varies over space and time in its scale, patterns and causes. The factors affecting migratory movements are by no means the same in all situations in any case, their relative importance differs. The findings of the studies regarding particular migratory movements are thus not exactly applicable to movements occurring under different conditions.

Broadly the factors affecting migration are generally classified into "push" factors which compell people to leave their native place and "pull" factors which attract them to a certain destination. This distinction, however, is not always clearcut or even of great analytical importance. A migratory movement is, usually, governed by both push and pull factors. Migrants may migrate because living condition in their native place are unfavourable, yet at the same time they may be attracted by better living conditions in another place.¹ In the process of migration "push" and "pull" factors act simultaneously, migrants are pushed from the villages due to poverty; at the same time, they are pulled

¹Citroen, H.A. (1948) : Les Migrations Internationales, Un Problem Economique Social, Paris, p.22.

into the cities by the attraction of high incomes and "bright lights". Pushed migrants leave in search of better opportunities in the cities, similarly so called pulled migrants also leave the villages for adequate income and status which rural areas fail to provide. Hence, such distinction is not adequate and analytically satisfactory.

In the absence of war, social upheavals or natural calamities, migration is primarily motivated by the desire for attainment of better level of living. "The migration in recent times have been due mainly to economic factors, though other factors also were of some importance".² To obtain the improvement in their material condition of life people are attracted to areas where economic opportunities are relatively abundant and where they will receive higher remuneration for their work.³ However, not every individual who might achieve a higher standard of living through migration desires to migrate and not every one who wants to migrate is able to do so. Economic impulses operate within the framework of cultural, political, and geographical environment.⁴

²United Nations (1954) : The Determinants and Consequences of Population Trends, p.111.

³Thomson, W.S. (1942) : Population Problems, New York, p.373.

⁴United Nations, op. cit, p.112.

Thus, the question 'who migrates', assumes considerable significance in migration analysis. What sort of socio-economic system ejects large part of their population in migration flows, is also equally important. With these twin objectives in view, analysis of the characteristics of the 'villages' and 'villagers' leaving these villages will be the main focus of this chapter. Before, we analyse these factors in the context of Kumaon region, recapitulation of some generally observed socio-economic and other characteristics encouraging migration will be appropriate.

5.1 Village Characteristics

The following observation by Connell and others, more or less sums up the conditions of a village that determine out-migration : "the migration rate from a village appears to be influenced by five main groups of village economic characteristics - land availability, agricultural seasonality, occupation structure, village location and communications, and overall level of living. In all five cases, there is some evidence that maldistribution - respectively of land, of local off season opportunities, of job diversification within the village, of easy access to the city and of income and wealth-is more important than overall,

average depression in pushing up a village's emigration rate".⁵

Some studies observe that a high pressure of population on land indicated by a high man/land ratio is associated with a high rate of out-migration.⁶ But in some studies areas with high density of population have been found to have a fewer out-migrants.⁷ However, scarce and poor village lands do usually mean higher emigration.⁸ In their survey of literature Connell et.al. quote⁹ a recent cross-national study covering number of countries of Asia, Africa and America conducted by Development Research Centre which found an almost universal pattern of migration from rural depressed regions. Even though the focus of the study was on squatter settlements in the capital city, and, therefore, its representativeness may be doubted to some extent. Yet it could have general validity, by and large, for all rural urban migration.

⁵ Connell, John; Dasgupta, B; Laishley, R. and Lipton, M; (1976) : Migration from Rural Areas, Delhi, Oxford University Press, p.202.

⁶ Preston, D.A. (1969) : Rural Emigration in Andean America, Human Organisation, 28(4), pp.279-86. Also see, A.C. Walsh, et.al. (1973) : "Nivean Migration", Journal of Polynesian Society, 82(1), pp.47-85.

⁷ Puspis, F.W. et.al. (1972) : Rural Manpower, Rural Institutions and Rural Employment in Thailand, Manpower Planning Division, National Economic Development Board, Bangkok, pp.96-103. Also see P. Hill (1972) : Rural Houses a Village and a Setting, Cambridge University Press.

⁸ Connell, J. et.al., op.cit, p.282.

⁹ Connell, J. et.al., op.cit, p.10.

Studies reveal that cash cropping encourages short term migration, after acquiring necessary investible surplus and cash cropping being established, propensity to migrate is lowered down. In slack agricultural season when poor inhabitants of villages do not find employment in their villages, they are seasonally pushed to the areas of prosperous agriculture, plantation and sites of construction works. The moves are mostly rural to rural.¹⁰

However, migrants do not come only from the poorest sections of households, they also come from the richer sections of the villages. In many countries it has been found that even among from agricultural labourers rural-urban migrants are often those, who have relatively higher per capita output.¹¹ They move towards cities after realizing that the higher standard of living can be achieved through migration.¹² Some of the North Indian village studies¹³ suggest that both rich and poor migrate from the

¹⁰ University of Madras, Agro-Economic Research Centre, Village Surveys, 42 Sengipatti Village, n.d, Madras (Mimeo.), also see, Census of India, 1961, Vol.3, Assam, Part VI, 6, Batasipur, Delhi, 1968.

¹¹ Lively, C.E (1938) : The Development of Research in Rural Migration in the United States, Demographie etudes specials, Congress International de la population, Paris, 1937, Vol.IV, p.104.

¹² Thorndike, E.L. (1942) : The Causes of Inter-State Migration, Sociometry, Vol.V, No.4, Nov, pp.321-335.

¹³ Sovani, N.V. (1965) : Urbanisation and Urban India, London, Asia, pp.142-48; also see Connell, et.al, op.cit, p.12.

same villages. In case of poor, complete households are found moving, while richer households ejects individual migrants only. The rate of migration is also found to be related with unequal distribution of resources among the households, greater inequalities leading to higher rates of migration.

Development of village industries and other non-farm activities creates occupational diversities reducing dependence on agriculture. These factors create additional work in the villages resulting in reduced tendency to migrate on the part of the villagers.¹⁴

Improved transportation facilities are supposed to have facilitated the increased migration during last hundred years.¹⁵ It is observed that cheap and affective transport system reduce the deterrent effects of distance.¹⁶ Easy and cheap communication encourages migration¹⁷ even from physically remote places,¹⁸ but in the beginning rate of

¹⁴ Hanley, S.B. (1973) : Migration and Economic Change in Okayama During the Tokugawa Period, Keio Economic Studies, 10(2), pp.19-36.

¹⁵ Kirk, D. (1946) : Europe's Population in the Inter-War Years, League of Nations, Geneva, p.152.

¹⁶ Speare, A.P. Jr. (1974) : Urbanisation and Migration in Taiwan, Economic Development and Cultural Change, 22(2), pp.302-319.

¹⁷ A-Delman, and Dalton G. (1971) : Modernisation in Village India, Economic Journal, 81, pp.563-579.

migration are higher from nearby places rather than the distant places. But some studies observe that migration is negatively associated with nearness as the proximity to road or town encourages commuting rather than migration. Not only transport links but also the extent of integration of villages with urban net work, and degree of commercialisation have bearings on migration rates. Reliance on monetised economy provide contacts and information, reduces risks and costs and in general creates a disposition to migrate.¹⁹

Factors inducing migration may be bifurcated as 'village based and urban based'. Village based factors include : land shortage, low fertility of land, skewed distribution of land, and resulting high proportion of landless agriculturists while urban based factors consists of commercialisation of agriculture as indicated by the percentage of village produce sold, and the percentage of land under main cash crop, followed by access to towns.²⁰

¹⁸ A Bou-Zeid, A.H. (1963) : Migrant Labour and Social Structure in Kharga Oasis in J. Pitt-Rivers (ed.), Mediterranean Country-men : Essays in the Social Anthropology of the Mediterranean, Paris Mouton, p.46.

¹⁹ Connell, J. et.al, op.cit, pp.15-17.

²⁰ Ibid, pp.189 and 196.

In addition, the various cultural factors governing social customs and stratification in the villages can affect the rate of migration. Sometimes, cultural values interlocking with environment generate tradition of migration for some groups while the same create obstacles and disincentives for other social groups. In caste ridden societies, where people of higher caste are preferred, lower caste people do not go further away to seek employment as they lack links in the towns.²¹ Thus, the rate of migration may vary from village to village according to the proportion of the households of different caste or social groups inhabiting the villages.

5.2 Characteristics of Villagers

If we examine the point 'who migrates' from neo-classical point of view, "it is the poorest, the landless and those holding the lowest position in the social hierarchy of the village who have the greatest reason to leave the village and try their luck elsewhere".²² But the discussion regarding village characteristics does not

²¹ Epstein, T.S. (1973) : South India : Yesterday, Today and Tomorrow, London, p. 141.

²² Connell, John, op.cit., p.19.

support the neo-classical hypothesis, it rather establishes that migrants are not necessarily those who are worst sufferers due to scarcity. Mostly, the members of land holding families who can bear the costs, risks and delayed returns join the migration flows. The poorest people, may also venture to migrate but from only prosperous villages where wages are higher and sense of deprivation is also higher.²³ The hypothesis that land deprivation contribute to high propensity to migrate is invalidated by numerous intervening obstacles and disincentives. Number of studies confirm that migrants mostly come from landowning class of above average economic level who are able to engage agricultural labourers at origin by remittances.²⁴ Most of the migration is selective by age, sex and education. Hence Connell et.al. observe : "In general many determinants of individual migration destroy the expectation that the landless or, in general the poorest or the lowest status groups, are as such the likeliest to migrate. Not only youth but also maleness, education and urban contacts tend to increase

²³ Oberai A.S. and Singh, H.K. Manmohan (1985) : Causes and Consequences of Internal Migration : A Study of Indian Punjab, Delhi, p.60.

²⁴ Caldwell, J. (1969) : African Rural Urban Migration : The Movement to Ghana's Towns, London, Hurst. See also Essang, S.M. and Mabawonku, A.F. Determinants and Impact of Rural Urban Migrations : A Case Study of Selected Communities in Western Nigeria, Michigan State University and University of Idaban, African Rural Employment Paper No.10, pp. 21-22.

individuals propensity to migrate. None of these features is likely to be correlated with the landlessness, indeed, education is correlated positively with size of holding".²⁵ Dependents of owner farmers are found to be more prone to migrate than tenants.

Non-benefitting labourers are encouraged to migrate by land reforms. Non-agriculturists/village artisans are less likely to migrate till there is demand for their products in the villages. Production substitutes and innovations replacing human labour induce the jobless to migrate. Disintegration of household industry and the introduction of new farm machinery in the rural areas denies remunerative work to artisan class and thus impells them to migrate.²⁶ In some places, however, technological change in agriculture has reduced the propensity to migrate²⁷ and has induced in-migration from other areas.²⁸

It is noted that wage earners mostly constitute the rural to rural stream, while self-employed workers constitute

²⁵ Connell, J, op.cit, p.21.

²⁶ Oberai and Singh, et.al; op.cit, p.60

²⁷ Long, N. (1968) : Social Change and Individual, Manchester University Press, p.32.

²⁸ Sardar Patel University AREC (1973) : Economic and Social Implication of Green Revolution, Vallabh Vidyanagar.

the largest category among out-migrants to the urban areas.²⁹ Generally, illiterate unskilled rurally-oriented out-migrants in the towns, stay for limited period while high aspiring village-abhorring tend to become permanent town dwellers.³⁰ Greater rural-urban integration, social differentiation restricting access to rural opportunities and wide rural-urban income differential produce substantial migration of permanent nature.

Indian data from village studies suggest that the majority of migrants are adult males, married and on the balance educationally more advanced than the average villagers. Most of the individual migrants (as opposed to households) come from cultivator and non-agricultural households while agricultural labourers households contributed a very insignificant proportion.³¹

Economic factors interacting with numerous personal, familial, social and other factors determine the rate of migration. "Almost everywhere, migration concentrates extremely heavily on villagers aged 15-30".³² Majority of

²⁹ Oberai and Singh, op. cit.

³⁰ Joshi, H. (1973) : Migration and Urban Employment Problems: A Study of Ivory Coast, Oxford University, Institute of Economics & Statistics, p.37 (Mimeo.).

³¹ Connell, J. et.al, op.cit, p.189.

³² Speare, A.Jr, Goldstein, S. and Frey, W.H, Residential Mobility, Migration and Metropolitan Change, Cambridge Mass, p.128.

studies confirm this proposition. Limited integration in village social system, independent and questing attitude and relative freedom from responsibilities make the younger persons more prone to migrate. Out migration of younger persons has assumed ceremonial importance in number of communities in the world. It is treated as a 'rite of passes' into adulthood. Even where migration does not become ritualised, those who stay in the village lose status and prestige for not migrating, if returning migrants demonstrate their success by engaging in conspicuous consumption.³³ At this point, the concept of 'income maximising with rational decision making', seems to be in jeopardy. Age selectivity is further enhanced by student and marriage migration as both are most common at lower age cohorts. Female migration however, is not found to have any marked effect on age selectivity, as evidenced in Khanna study.³⁴

Leaving aside marriage migration, migration is generally male selective.³⁵ Most of the studies conducted in the third World confirm this proposition.³⁶ Particularly in Asia,

³³ Joshi, H, op. cit.

³⁴ Wyon, J.B. and Gordon, J.F. (1971) : The Khanna's Study : Population Problem in the Rural Punjab, Cambridge (Mass), Harvard University Press, p.214.

³⁵ Connell, J, op. cit, p.42.

³⁶ Caldwell, op. cit, p.76. See also Oberai and Singh, p.52.

migration has been found male selective though varying in pattern geographically and according to the nature of migration. Female, generally, migrate later on to join the successful husbands,³⁷ which mostly goes to convert the temporary or semi-permanent individual migration into permanent family or households migration. Patrilineal pattern of society, predominance of male selective jobs in most of the economic activities, lower participation of women in education circumscribe female mobility. But in the societies where female enjoy relatively independent status, no stigma is attached to the mobility of single women, female out-number or equal male migrants for light jobs in industrial and commercial establishments and domestic household services.³⁸

As regards family size, it has been found that relatively large extended families tend to send migrants as their needs and earning capacities are larger than offered by local opportunities. Positive correlation between migration and large family size has been established in a good number

³⁷ Wyon, & Gordon, op. cit. pp. 210-219.

³⁸ Joshi, H. op. cit. and See also Hort, D.V. (1971) : Philippine Rural Urban Migration, A View from Caticugan, a Bisayan Village, Behaviour Science Notes, 6(2), p.117 and Anderson, J.A. (1972) : Social Strategies in Population Change; Village Data from Central Luzon, South-East Asia Development Advisory Group Paper, 15, New York, Asia Society, p.14.

of studies.³⁹ The tendency of big families producing larger proportion of migrants is attributed to, their attempt to reduce dependence on low and risky farm income; to avoid fragmentation of holding and their greater capacity to replace migrating workers. Extended families enjoy greater kin net work in towns which facilitates migration. In the societies where system of primogeniture prevails, younger sons are forced to migrate. Some agricultural societies keep elder sons from education to retain them in the farm but educate younger ones to migrate.⁴⁰ Also "the extent of male labour migration depends on the availability of such flexible and corporate kinship structure to provide exchanges of labour roles, and on whether the wife is willing and able to increase her responsibilities in a socially accepted fashion".⁴¹

Family conflicts and tensions also lead to migration. Lack of integration of younger generation in social system and their quest for independence from parental command is

³⁹ Pathare, P.A. et.al, Seasonal Migratory Agricultural Labourers at a Cooperative Sugar Factory in Maharashtra, Indian Journal of Agricultural Economics, 27(4), 1972, p.237, and see Connell, et.al, op. cit, pp.45-48.

⁴⁰ Wyon & Gordon, op. cit, p.220.

⁴¹ Connell, et.al, op. cit, p.48.

one of the important reasons for migration. Inter-family and intra-family factions also lead to migration.⁴²

Migration flows are characterised by high degree of educational selectivity. Though migrants comprise a good number of illiterates, propensity to migrate increases with the acquisition of education. Propensity to migrate need not increase linearly with educational status as it varies person to person and place to place. Evidence show that the selection mechanism in the migration process concentrated on rich groups in more prosperous villages, and on both the richest and poorest groups in the poor villages.⁴³ "Such variations in the importance of different levels of education can reflect variations in the economic returns to education, for different levels of education; for such returns are higher where the base level of income, earnable at each level of education; if one stays in the village instead of migrating, is lower".⁴⁴ Since educational status is regarded as marketable commodity, better employment opportunities in urban areas, slow rising or stagnant rural

⁴² Singh, B. (1958) : Next Step in Village India, Dept. of Economics, University of Lucknow.

⁴³ Khuri, P.I. (1967) : A Comparative Study of Migration Patterns in Two Labanese Villages, Human Organisation, 26(4), p. 208.

⁴⁴ Connell, et.al, op. cit, p.61.

output and incomes and rural-urban income differentials are found to be main economic reasons behind migration. Many communities provide costlier education to their younger ones mainly to prepare them to leave the rural areas for employment.⁴⁵ Urban orientation of educated employment, dislike for manual work, higher stakes and high aspirations and reduced psychic cost of migration in the case of educated reinforce the propensity to migrate. Moreover, higher incomes with higher educational scale provide impetus for educated to migrate. Student migration is also an important phenomenon in-migration flows.

Despite the educational selectivity found in-migration patterns, migration streams are flooded with illiterates. In contrast to educated migrants, illiterates mostly join rural to rural stream and in case of urban destination they are forced to accept jobs in urban informal sector and small enterprises. They are mostly short term/seasonal migrants.⁴⁶ Due to the inequality in village resources and inaccessibility to education on the part of poor they are unable to stand at par with rich villagers. By more schooling of

⁴⁵ Wyon & Gordon, op. cit, pp. 220-222.

⁴⁶ Sahota, G.S. (1968) : An Economic Analysis of Internal Migration in Brazil, Journal of Political Science, 76(2), pp. 218-245.

children and urban links rich villagers set a chain of migration and enrich their resources which further deteriorates resource equality at origin. Due to the inequality at origin bi-modal patterns of migration are found everywhere.⁴⁷ However, process of education plays a big role in the pattern of migration and hence "is a huge sieve through which the most able young people pass to the cities, there to help the urban elite".⁴⁸

5.3 Characteristics of Migrants from Kumaon

As discussed in preceding chapters, Kumaon possesses distinctive economic, cultural, demographic and geographical characteristics not only in the State of Uttar Pradesh but in the country as a whole. With the objective of identifying characteristics of out-migrants from the region we have tried to analyse our data based on the sample study of eight villages of Almora district. In this process we will examine both the village characteristics - which impell or induce villagers to leave their native village - and the villagers - who are more prone to migrate outside.

⁴⁷ Connell, et.al, op. cit, p,68.

⁴⁸ Lipton, M. (1976) : "Why Poor Peoples Stay Poor?"
Urban Bias in Underdeveloped Countries, Temple Smith.

The term migrant/out-migrant (O.M.) household is used to denote a household having at least one person, has migrate elsewhere. Women migrating for marriage and commuters are, however, not considered relevant for this purpose.

5.3.1 Village Characteristics

Keeping in view the topography which conditions the accessibility to and from the region, the sample was divided in three stratas i.e. near the road and town, moderately remote from the road and town and far remote from the road and town. Remoteness denote not only the physical distance but also the difficult accessibility to road and town conditioned by side, aspect and altitude. Attempt has been made to give due representation to the villages having different irrigational status and inhabited by the major castes found in Kumaon region.

The analysis of village data (Table 5.1) suggests that there is direct link between the nearness to the road and town and rate of migration. It has a definite tendency to decrease with remoteness both as proportion of population and number of migrants per household. The range of out-migration from the villages near the road and town varies

Table 5.1 : Village Characteristics Affecting Out-Migration

Particulars	Near the road and town			Moderately remote from road & town			Remote from road and town			Grand Total		
	1	2	3	1	2	3	1	2	3	Total	11	12
	0	1	2	3	4	5	6	7	8	9	10	11
Households												
1. Total households	7	21	88	116	43	45	88	49	28	49	126	330
2. Out-migrant households	5	17	35	57	24	23	47	28	10	18	56	160
3. Out-migrant households as % of total households	71.4	80.9	39.8	49.1	55.8	51.1	53.4	57.1	35.7	36.7	44.4	48.5
Population												
1. Existing population	36	115	427	578	246	199	445	292	137	246	675	1698
2. Out-migrants	11	30	80	121	44	24	68	37	13	29	79	268
3. Percentage	30.5	26.1	18.7	20.9	17.9	12.1	15.3	12.7	9.5	11.8	11.7	15.6
4. Population including out-migrants	47	145	507	699	290	223	513	329	150	275	754	1966
5. Out-migrants as % of sl.4	23.0	20.7	15.8	17.3	15.2	10.8	13.2	11.3	8.7	10.5	10.5	13.6
6. Proportion of migrants per household	1.6	1.4	0.9	1.0	0.5	0.5	0.8	0.7	0.5	0.6	0.6	0.8
Literacy												
Literates as % of population including out-migrants	53.2	70.3	55.2	58.2	45.2	48.4	46.6	65.6	39.3	39.3	50.8	52.3

Contd. . ./-

Table 5.1. Contd.

	1	2	3	4	5	6	7	8	9	10	11	12
<u>Land Holding</u>												
1. Average size of holding (hec.)	1.06	0.47	0.64	0.25	0.46	0.36	0.75	0.62	0.50	0.62	0.55	
2. Per capita land holding (hec.)	0.15	0.07	0.11	0.10	0.04	0.09	0.06	0.11	0.09	0.10	0.09	
3. Net area irrigated as proportion of net area sown	34.2	6.2	32.6	29.2	—	—	—	35.5	28.8	11.0	26.4	23.0
4. Population (including out-migrants) per hect. of cultivated area	6	15	9	9	27	10	16	9	11	11	9	11
<u>Caste Composition</u>												
1. Percentage households												
a. Brahmin	100.0	—	—	6.0	86.0	17.8	51.1	49.0	—	—	19.1	23.0
b. Thakur	—	—	65.9	52.6	14.0	2.2	7.9	44.9	60.7	75.5	60.3	42.4
c. Backward Castes	—	100.0	—	18.1	—	2.2	1.1	—	—	—	—	6.7
d. Scheduled Castes	—	—	34.1	23.3	—	77.8	39.8	6.1	39.3	24.5	20.5	27.9
2. Out-migrants households as % of Caste households												
a. Brahmin	71.4	—	—	71.4	62.0	100.0	68.9	62.5	—	—	62.5	67.0
b. Thakur	—	—	55.2	55.2	16.7	0.0	16.7	59.1	41.2	48.6	50.0	50.0
c. Backward Castes	—	80.9	—	80.9	—	100.0	100.0	—	—	—	—	81.8
d. Scheduled Castes	—	—	10.0	10.0	—	40.0	40.0	0.0	27.3	0.0	11.5	22.8

between 16-23 per cent while it ranges from 11 to 15 per cent from villages moderately remote from the road and town; and from 9 to 11 per cent from the villages far remote from road and town. Though the latter villages are also recently linked or are being linked by road yet they have comparatively less integration and link with the towns. Higher propensity to migrate from the villages near the road and town is the natural consequence of the process of the spread of communication net works. Lee's concept of intervening obstacles : that the number of impediments facing the migrants; physical, financial and psychic increases with the distance,⁴⁹ seems to be truly applicable in this case.

Despite the fact that higher propensity to migrate (of individuals) is closely related with the proximity to road and town, the proportion of households participating in this process is highest (53 per cent) from second group (moderately remote from the road and town) of the villages (Table 5.1). Poor agricultural conditions leading to low output, even below subsistence level, seem to impell more households to eject its members in search of outside employment in order to bridge the gap between basic minimum

⁴⁹ Lee, E.S. (1969) : A Theory of Migration in J.A. Jackson (ed.), Migration, Cambridge (Mass), pp. 282-297.

needs and poor output at native place. Agricultural conditions in this group of villages are marked by the lowest size of average holding (0.36 hectare); highest man-land ratio (16 persons per hectare) and zero proportion of net area irrigated to net area sown. Incidentally, literacy rate is also lowest in this group of villages. It seems that both type of villages i.e. economically better-off and depressed produce out-migrants, but in case of former migrants in number constitute larger proportion while in the latter the proportion of households sending-out migrants is significant. Out-migrants from the former aspire for betterment of life while those from latter seek fulfilment of the basic minimum of life.

Third group villages (far remote from the road and town) are similar with villages of first group as regards the agricultural conditions in the villages i.e. average size of landholding, man/land ratio, proportion of net area irrigated to net area sown and land-holding per capita are almost similar in two groups of villages. Although, rate of literacy among first group of villages is higher. Hence higher rate (nearly by double) of out-migration from the villages of first group may be attributed to more proximity to road and town and higher rate of literacy. Presence of

both of these factors imply comparatively more information and awareness; more integration and links as regards the outer world, particularly towns, in addition to easy access to them.

In fact, village inequalities based on size of holdings has a very insignificant bearing upon the rate of migration from the region. Where majority (96 per cent for hills and 87 per cent for region as a whole) of holdings range between 0-5 acres and proportion of area irrigated (partially irrigated in strict sense of the term) is very meagre (about 10 per cent), agricultural output generally remain below subsistence level. Even the economy of big land-holders does not cross that level. Hence the analysis of out-migration in the perspective of economic characteristics only, seems inadequate in the context of Kumaon region.

The rate of migration from the region has to be understood against the background of a number of particular climatic, economic and agricultural circumstances. Primitive farming with terrace cultivation, lack of irrigation, small scattered holdings and other unfavourable factors result in a low farm yields. Modernising of farming and adoption of new high yielding varieties is next to impossible due to unsuitable topography, adverse weather conditions and

deficiencies in the irrigation system.⁵⁰ Moreover, lack of structural diversification, growing of comparatively higher pressure of population on arable lands, rapid depletion of natural resources, topographical hazards constraining the use of mechanical and even animal power in economic activities, back breaking and comparatively higher quantity of manual labour per unit of output (even for directly non-economic activities e.g. collection of fodder and fuel, fetching of water and flour from down the valleys etc) and high cost of commodities produced outside the region accentuate the rate of migration from the region. Against this background, it becomes important to analyse as to 'who succeeds in migrating' rather than 'who migrates'.

Interaction of social and other factors with the factors mentioned above seem to have a major role in determining the rate of migration from the villages. Caste composition of the villages interlocked with literacy has important bearing upon the rate of migration from the sample villages. Proportion of out-migrants as well as out-migrant households is positively associated with rate of village literacy. Proportion of migrants also seems to be related with the caste composition of the village. Propensity to migrate from the villages inhabited by Brahmins and backward caste is higher than the villages inhabited by Thakurs and

⁵⁰ Cf Singh, R.D. (1977) : Labour Migration and Its Impact on Employment and Income in a Small Farm Economy, International Labour Review, Vol.116, No.3, Nov-Dec, p.332.

Scheduled Caste. Even from mixed villages propensity to migrate is greater from Brahmins and backward caste households in comparison to Thakur households. Propensity to migrate is highest from backward caste households (82 per cent) followed by Brahmins (67 per cent) and Thakurs (50 per cent) households. Scheduled Caste households have the lowest (23 per cent) propensity to migrate. Our sample data has brought to fore an interesting phenomenon regarding the migration propensity of Scheduled Caste households. These households have the lowest propensity to migrate from the villages having comparatively better agricultural conditions, but from agriculturally depressed villages the proportion of Scheduled Caste out-migrant households has risen to 40 per cent of total households (Table 5.1). Actually, in Kumaon Scheduled Castes do not compose a class of landless agricultural labour only, but they primarily belong to the sections of rural artisans. More than engaging in agricultural labour they manufacture and repair agricultural implements. They are masons, builders, carpenters and masters of other rural crafts. So, they are always in great demand in rural areas. They only migrate from the pockets where due to poverty, their skills remain unutilised. Reservation policy of government has also encouraged educated Scheduled Caste to migrate in order to take up government jobs.

5.3.2 Characteristics of Out-Migrant Villagers

We have tried to identify the types of villages having varying rates of out-migration in association with characteristics that are supposed to determine the rate of migration. Since every body from high migration prone villages does not migrate and persons from the villages lacking the characteristics which these villages possess, also migrate, it is important to analyse personal, familial, demographic, social and economic characteristics of population which induce individual to migrate.

5.3.2.1 Out-Migration and Sex : Keeping aside marriage migration, out-migration, in general, is found to be sex selective. Kumaon region is not an exception to this rule. Table 5.2 reveals that the proportion of migrant among males is found to be 23 per cent while it is only 3 per cent

Table 5.2 : Out-Migrants by Sex

Sex	Population excluding out-migrants	Population including out-migrants	Outs migrants	Out-migrants as % of population including out-migrants	Working out-migrants	Working out-migrants as % of total out-migrants
Male	809	1047	238	22.7	218	91.6
Female	889	919	30	3.3	-	-
Total	1698	1966	268	13.6	218	81.3
Sex ratio	1099	878	126	-	-	-

among females. Sex ratio excluding out-migrants is as high as 1099 while it is only 876 including out-migrants. Thus, the degree of male selective out-migration from the region is very high. Proportion of males in out-migrants is found to be 89 per cent in our sample. In a study of Indian Punjab⁵¹ this proportion was 96 per cent of total out-migrants. The reason for male domination in migration flows is domination of males in the society. "In the Indian sub-continent the subordination of female to the need of the male, like to prevailing patrilineal pattern, works against the migration of single women",⁵² as well as less participation of women in education reduces their migration for schooling and job both.⁵³ Moreover, unnatural division of labour between sexes, particularly in Kumaon allocates bulk of domestic as well as outside work to women which makes migration of males more convenient. Women's willingness to share greater responsibilities and facility of exchange labour available in Kumaoni society reinforces the rate of male out-migration. Whatever female migration there is, it is not for employment. Table 5.2 indicates that none of

⁵¹ Oberai, & Singh, op. cit, p.52.

⁵² Connell, et.al, op. cit, p.43.

⁵³ Ibid.

the female out-migrants is a working migrant. They have migrated to join the husbands and parents. Khanna study also finds that majority of females migrated to join the husbands already working.⁵⁴

5.3.2.2 Age at Migration : Stages on the life cycle have important bearing upon the process and pattern of migration. Most of the migration takes place in the age group 15-35. Leaving the native place at this age group is motivated by economic rationale, independent and questing attitudes and relative freedom from responsibilities. In our sample (Table 5.3) 91 per cent of out-migrants left their native place when they were in the age group 15-35, 8 per cent

Table 5.3 : Out-Migrants by Age at Migration

Age groups	Number of out-migrants	Percentage	Average age
0 - 5	6	2.2	2.5
5 - 15	16	6.0	9.3
15 - 25	205	76.5	20.1
25 - 35	39	14.6	26.4
35+	2	0.7	50.5
TOTAL	268	100.0	20.2

⁵⁴ Wyon & Gordon, op. cit., pp. 210-219.

when below the age of 15 years and 1 per cent after the age of 35 years. Migrants below 15 years of age represent students and children accompanying parents. Average age at migration is 20 years; thus most of the migration takes place at the lower end of working age. In his study of Pithoragarh district Khanka also found that 138 out of total 153 i.e. 90 per cent out-migrants belonged to age group 15-35.⁵⁵ Elsewhere also the similar phenomenon is observed. Out-migration in this age group is more than 80 per cent from eastern Uttar Pradesh⁵⁶ and Indian Punjab.⁵⁷

5.3.2.3 Out-Migration and Education : A very high level of educational selectivity is noticeable among the migrants in our sample. Of the total population (excluding below 6 years of age); illiterates are 42 per cent and literates 58 per cent, but among out-migrants, 89 per cent are literates. Though literates and illiterates both migrate but the propensity to migrate increases with the levels of education (Table 5.4). From among the population of different

⁵⁵Khanka, S.S. (1984) : Migration from Kumaon Region : Some Findings Based on a Sample Study of Pithoragarh District in The Indian Journal of Labour Economics, Vol. XXVI, January, p.306.

⁵⁶Khan, Najma (1981) : Pattern of Male Out-Migration from Eastern U.P. : A Study of Twelve Villages, in Frontiers in Migration Analysis (ed.), RB Mandal, New Delhi, p.493

⁵⁷Oberai and Singh, op. cit, p.56.

Table 5.4 : Out-migrants by Educational Status

Educational levels	Population	Out-migrants	Percentage to population
Non-school going	199 (10.1)	3	1.5
Illiterate	738 (37.5)	30	4.1
Primary and below	569 (29.0)	65	11.4
Below matric	228 (11.6)	66	28.9
Secondary	201 (10.2)	86	42.8
Graduate	22 (1.1)	14	63.6
Post-Graduate	9 (0.5)	4	44.4
TOTAL	1966 (100.0)	268	13.6

educational levels propensity to migrate has increased linearly upto graduate level. Lower risks and psychic costs in case of educated persons, orientation of education for urban jobs and rising scale of returns with the level of education are the main reasons behind the educational selectivity of rural-urban migration.

Proportion of illiterates among out-migrants (11 per cent) in our sample is quite similar to that of Indian Punjab (11.3 per cent) but lower than that of eastern U.P. (47 per cent).⁵⁸ Punjab, being agriculturally advanced region has relatively better employment opportunities for illiterate people; in fact, it attracts a large number of seasonal migrants from eastern U.P. and Bihar. The reasons for lower propensity to migrate on the part of illiterates from Kumaon which is economically backward, seem to be other than economic also. Intervening obstacles both in terms of physical and socio-cultural distances coupled with costs, risks, and lack of links seem to have heavy account for the low proportion of illiterate out-migration.

5.3.2.4 Out-Migration and Family Size : The observation that migrants tend to come from large families in which both the need and earning capacity are relatively higher than the local earning opportunity, is largely supported by our data (Table 5.5). Proportion of out-migrants from the families of upto 6 members is quite low. It is progressively higher from the families having 7 and more members

⁵⁸ Ibid.

⁵⁹ Khan, Najma, op. cit, p.494.

Table 5.5.1 Out-migrants by household size

and is highest from the families having more than 10 members. A positive relationship between family size and out-migration was also observed in another study in the region. It observes that "the positive sign of this variable does suggest that the pressure of population on land, which is bound to be accentuated with increasing family size, frees people to seek outside employment".⁶⁰

5.3.2.5 Out-Migration and Size of Operational Holdings :

Out-migration is positively associated with the size of holding. Propensity to migrate from the households with holding below one acre is below average (Table 5.6). It is above average from the households having holding size of one acre and more, being highest from the households having more than 5 acres of land holding. Similar tendency is found in the studies of Pithoragarh by Khanka.⁶¹ R.D. Singh found the combined effect of farm size and education to be both positive and significant. The impact of the former has been remarkably higher than that of the latter.⁶² In Indian Punjab, propensity to migrate is found to be higher

⁶⁰ Singh, R.D, op.cit, p.335.

⁶¹ Khanka, S.S, op. cit, p.307.

⁶² Singh, R.D, op. cit.

Table 5.6 : Out-Migrants by Size of Holding

Size Class	Irrigational Status (acres)	Out-migrant Households (%)	Total House- holds (%)	Relative mi- gration pro- pensity*	Number of out-migrants	Average mi- grant per household
0 - .25	Total	9.4	12.7	74	25	1.7
	Unirrigated	15.7	16.9	93	20	1.7
	Partially irrigated	3.6	8.5	42	5	1.7
.25- .50	Total	6.2	10.3	60	16	1.6
	Unirrigated	13.2	15.1	87	16	1.6
	Partially irrigated	-	5.5	-	-	-
.5 - 1.0	Total	17.5	21.5	81	38	1.4
	Unirrigated	26.3	33.1	79	27	1.3
	Partially irrigated	9.5	9.7	98	11	1.4
1.0- 2.0	Total	32.5	26.7	122	87	1.7
	Unirrigated	27.6	22.9	121	30	1.4
	Partially irrigated	36.9	30.5	121	57	1.8
2.0- 3.0	Total	18.1	16.7	108	46	1.6
	Unirrigated	13.2	9.0	146	12	1.2
	Partially irrigated	22.6	24.4	93	34	1.8
3.0- 5.0	Total	12.5	10.0	125	39	1.9
	Unirrigated	3.9	3.0	131	3	1.0
	Partially irrigated	20.2	17.1	118	36	2.1
5.0+	Total	3.7	2.1	176	17	2.8
	Unirrigated	-	-	-	-	-
	Partially irrigated	7.1	4.3	166	17	2.8
Total	Total	100.0	100.0		268	1.7
	Unirrigated	100.0	100.0		108	1.4
	Partially irrigated	100.0	100.0		160	1.9

* Average migration propensity = 100

from holding size of more than 5 acres than from the small holders.⁶³

In further analysis of holding size by status of irrigation (Table 5.6), it is noticeable that propensity to migrate from the households having unirrigated holdings is greater than those having partially irrigated holdings (in Kumaon hills round the year irrigation is, generally, not available so irrigated holdings are termed as partially irrigated). But number of migrants per household are greater from the households having partially irrigated holdings probably for the reason that being more prosperous they are better educated; better able to endure risks, costs and delays; have better links with towns; and are able to replace family labour by hired one.

5.3.2.6 Out-Migration and Main Family Occupation : By occupation, households pursuing agriculture and animal husbandry have the highest propensity to migrate. Even among cultivators, households those who do not pursue animal husbandry as an allied occupation to agriculture have the higher relative propensity to migrate (Table 5.7). Household pursuing other non-agricultural works as main

⁶³ Oberai and Singh, op. cit. p.61.

Table 5.7 : Out-Migrants by Main Family Occupation

Main occupation	Out-migrants households (%)	Total house- holds (%)	Relative migration propen- sity*	Average migrant per house- hold
	N = 160	N = 330		
Agriculture	11.9	7.3	163	1.6
Agriculture and animal husbandry	72.5	68.5	106	0.9
Labour	6.9	7.9	87	0.4
Artisan	5.0	9.4	53	0.3
Business	0.6	1.2	50	0.2
Service	3.1	5.1	61	0.5
Others	-	0.6	-	-
TOTAL	100.0	100.0	-	0.8

* Average migration propensity = 100.

occupation, have very low propensity to migrate. Propensity to migrate on the part of labour households is also below average though it is higher than non-agricultural households. The reasons for this situation seem to be manifold. Firstly, both primitive agriculture and animal husbandry yield poor returns, particularly in the hills, as compared to other occupations. Secondly, the former occupations are

mainly manned by females as an outcome of division of labour between sexes, while other occupations are mostly looked after by males. Both the factors induce/impell males to migrate from the households pursuing agriculture and animal husbandry. Since most of the labourers come from Scheduled Caste and most of them, as noted earlier, compose the class of rural artisans in hills, and as such their services assume importance resulting in a greater demand for them locally. Moreover, lower levels of education, lack of information and urban links and higher cost of migration in terms of travelling, waiting etc. also keep them contended with local employment.

5.3.2.7 Out-Migration and Annual Household Income : Associating migration with present levels of households income (excluding remittances), our sample reveals (Table 5.8) that in spite of numerical superiority of migrants in middle income groups (Rs.1000-5000) relative propensity to migrate is highest from lowest income levels both in terms of participation of households and migrants per household. It also indicates a tendency of declining rate of migration with increased incomes and then increasing at the highest income level.

Table 5.8 : Out-Migrants by Annual Household Income

Income Class (Rs.)	Out-migrants households (%) N = 160	Total Households (%) N = 330	Relative migration propensity* N = 330	Number of mi- grants	% of migrants	Average migrant per house- hold
0 - 500	2.5	1.2	208	5	1.9	1.2
500 - 1000	5.6	4.5	124	16	6.0	1.1
1000 - 1500	11.9	7.6	157	28	10.4	1.1
1500 - 2000	18.1	13.0	139	43	16.0	1.0
2000 - 3000	25.0	28.9	86	64	23.9	0.7
3000 - 5000	25.6	29.1	88	73	27.2	0.8
5000 - 7000	6.3	9.4	67	18	6.7	0.6
7000+	5.0	6.4	78	21	7.8	1.0
TOTAL	100.0	100.0		268	100.0	0.9

* Average migration propensity = 100.

Actually, present income (income at the time of enquiry) does not seem to be a good indicator to correlate migration with the levels of income. Migration changes the income composition of household not only by remittances but also by the act of migration itself. Absence of ablest member of household may adversely affect the income from native resources. On the other hand, non-migrant households pursuing more than one occupation may step up the higher ladders of income ranks. Our sample data reveals that 77 per cent of non-migrants were pursuing subsidiary occupations while only 23 per cent of out-migrant households do so. Out-migrant households fail to augment their income at household level either in anticipation of remittances or due to the shortage of manpower. Instead of present income, household income at the time of out-migration would have been the appropriate correlate of the rate of migration. But estimates of past income are generally difficult to ascertain.

5.3.2.8 Out-Migration and Caste : Our findings regarding caste and out-migration goes contrary to general belief that higher caste people commanding more resources and wealth should migrate less than the lower/Scheduled Caste who generally are landless or near landless and hold the

Table 5.9 : Out-Migrants by Caste

Castes	total households (%) N = 330	Out-migrants households (%) N = 160	Relative migration propensity*	Population including out-migrant (%) N=1956	Out- migrants (%) N = 268	Average household size
Brahmins	23.0	31.9	139	27.1	31.0	114
Thakurs	42.4	43.7	103	42.6	48.5	113
Backward Caste	6.7	11.2	167	7.7	11.7	152
Scheduled Caste	27.9	13.1	47	22.6	8.9	39
TOTAL	100.0	100.0		100.0	100.0	6

* Average migration propensity = 100.

weakest economic position in the society. Table 5.9 reveals that highest propensity to migrate is observed in the households and population of backward caste having some universally acceptable skills (hair cutting etc.) followed by the Brahmins. According to traditional division of labour across the caste line Brahmins had been prohibited from ploughing the fields for agriculture, the main duty assigned to male in the hills. Secondly, they have enjoyed monopoly over education and official jobs in the past. Thus, they have wider opportunities, experiences, tradition and outside links for migration. Thakurs mostly join armed forces since 1917 when a unit of armed forces was established in the region. The low incidence of migration among scheduled caste may be largely attributed to the low level of education, lack of information about employment opportunities and lower capacity to finance the move and to bear the risks. Moreover, they enjoy the status of artisans, masons and builders in the region and thus are in great demand. They earn more in region itself than what they could have earned elsewhere.

5.4 Conclusions

Analysis of the data from sample villages indicate that villages near the road and town are more migration

prone than remote villages. Poor agricultural conditions in the villages impell more households to eject out-migrants in comparison to villages with better agriculture. But latter type of villages produce higher number of individual migrants than the former. Their tendencies in both type of villages are significantly influenced by the rate of literacy and physical conditions of the villages as both of them have a positive relationship with the rate of migration. The villages inhabited by the castes whose member possess the skills related to agriculture only produce lesser out-migrants than the villages inhabited by the castes possessing other skills also.

Analysis by personal characteristics of out-migrants indicates that migration is selective by age, sex and education as 89 per cent of total migrants were male; 91 per cent in the age group 15-35 years at the time of migration; and 88 per cent educated. Mostly, these out-migrants tend to come from the larger families and families having larger size of holdings. Occupationally, cultivators followed by agricultural labourers have higher propensity to migrate than the persons persuing other occupations. By caste, Brahmins and backward castes have higher propensity to migrate than Thakurs and Scheduled Castes.

CHAPTER VI

Causes and Process of Migration

It is not easy to ascertain the motive behind the individual's decision on migration. Migration decision making is a complex process; even a migrant himself is not always clear about his motivation; because the factors involved in his decision to migrate are numerous and inter-related. The problem becomes more complicated when we find that some individuals migrate while others in similar settings and circumstances do not. In empirical studies, the motivations for migration ascertained as a response to "why people move" are found to be inadequate to the extent they do not provide insights for the reasons "why people do not move". Secondly, "reasons for moving statements may reflect pre-move motivations, but they may also be a rationalised proxy, as known and verbalised by respondents, for multiple motives that underlie migration decisions".¹ So the conclusions drawn about migration motivations are regarded to be general and crude.²

¹ De Jong, Gorden F. and Fawcett, James, T. (1981) : Motivation for Migration : An Assessment and a Value Expectancy Research Model", in Migration Decision Making, Multidisciplinary Approaches to Micro-Level Studies in Developed and Developing Countries, (ed.) Gorden F. De Jong and Robert Gardner, Pergaman Press, pp.34-35.

² Ibid.

Keeping in view the complex nature of migration motivations, Kingsley Davis observes : "The causes of human migration have never been systematically understood. When people speak of them, they often have in mind, either the motives that migrants carry in their heads or the conditions they face. It is not always realised that both kinds of 'Causes' are relevant and mutually interdependent. Except when forced to do so (as in slavery), no one migrates without an end in view. At the same time, however, the effect of an end with respect to migration cannot be known until the conditions are understood. The same end may be satisfied at one time by one kind of behaviour and at the another time by an opposite kind, depending on the situation".³

Decision to migrate or not to migrate depends on economic and social 'aspirations' of individuals. These aspirations may differ from person to person. Since it is not possible to quantify certain socio-cultural and personal variables, any yardstick or model which may help in ascertaining the exact motive behind migration, cannot be developed. Hence, Arnold Rose points out, "certain conditions facilitate migration and their absence retard migration, when the search for

³Davis Kingsley (1964) : Human Society, Macmillan & Company, New York, p.586.

economic betterment is the chief motive for migration".⁴

6.1 Factors in Migration: Some Views and Observations

According to Everett Lee, "factors associated with area of origin, factors associated with area of destination, intervening obstacles between the place of origin and the place of destination, personal factors"⁵ determine the process of migration. To Donald Bogue, Economic, social, Political and psychological reasons cause migration.⁶ In his descriptive model of the study of causes of migration, Germani distinguishes three levels.

1. Objective Level : Which includes "push" and "pull" factors; and nature and condition of communication links, contact and information between the places of origin and destination.

2. Normative Level : The normative pattern which can retard and facilitate the decision to move and objective level operate within the framework of normative level.

⁴ Rose, Arnold M. and Knopf, Alferd, A (1965) : Sociology: The Study of Human Relations, New York, pp.501-502.

⁵ Lee, Everett S. (1975) : A Theory on Migration in Population Studies (ed) Kenneth C.W. Kamnseyer, Chicago, p.191.

⁶ Germani, G. (1965) : Migration and Acculturation, in Handbook for Social Research in Urban Areas (ed.) P. Hauser, Paris : UNESCO, pp.159-178.

3. Psychological Level : Includes attitudes and expectations of individual which may induce him to deviate from normative level.

Developing Germani's concept Taylor argues that all levels are conditioned by each other, though his analysis implies that economic factors are the root cause of migration.⁷ In his system approach relating to rural to urban migration in developing countries, Mabogunge notes : "Within the system framework, the explanation of why people migrate must be in terms of differential individual responses to the stimuli both from the environment and from within the system The stimulus to migrate is related to the extent of the integration of rural activities into the national economy to the degree of awareness of opportunity outside of the rural areas, and to the nature of the social and economic expectations held by the rural population, not only for themselves, but also for their children. Indeed, the notion of "expectations" or "aspirations" is central to an understanding of the ways in which the stimulus from the environment is transmitted to individuals, and for that reason it is a crucial variable in the theory of rural-urban migration".⁸

⁷ Taylor, R.C. (1969) : Migration and Motivation : A Study of Determinants and Types in Migration, (ed.) J.A. Jackson, Cambridge University Press, pp.99-133.

⁸ Mabogunje, A.L. (1975) : System Approach to a Theory of Rural-Urban Migration in Readings in Social Geography, (ed.) Emrys Jones, Oxford University Press, p.217.

To Hertzler, the advantages and disadvantages of the two places act as attractive and repulsive forces in migration.⁹ Migratory movements are accelerated by the interaction of economic inequalities and regional reproductive differentials of population between regions, notes Toshio Kuroda.¹⁰ B.N. Pal argues that relatively better conditions of living and better prospects in cities motivate villagers to migrate.¹¹ A good number of researches lay stress on economic factors to be main motivational force in migration decision making. Brinley Thomas regards economic factors to be predominant in migration and supersede other factors.¹² Zachariah also corroborates this view.¹³ In his study of sub-Saharan Africa, Gugler finds economic causes to be predominant in rural urban migration.¹⁴ Five studies in Bangkok, Bombay,

⁹ Hertzler, J.O. (1956) : The Crisis of World Population, Lincoln University, Nebraska Press, pp. 213-214.

¹⁰ Kuroda, Toshio (1972) : Continuity and Transformation of Migratory Behaviour in Japan, in Population Analysis and Studies, (ed.) I.Z. Hussain, Bombay, p. 252.

¹¹ Pal, B.N. (1974) : Family and Woman in Urban India in Population Growth and Human Development (ed.) Alferd De'Souza, Indian Social Institute, New Delhi, p. 7.

¹² Thomas, Brinley (1954) : Migration and Economic Growth, Cambridge University Press, p. 52.

¹³ Zachariah, K.C. (1969) : Bombay Migration Study : A Pilot Analysis of Migration to an Asian Metropolis in The City in Newly Developing Countries (ed) Gerald Brease, p. 369

¹⁴ Gugler, T. (1968) : The Impact of Labour Migration on Society and Economy in Sub-Saharan Africa, African Social Research, 6 December, p. 137.

Dacca, Delhi and Djakarta, conducted at the instance of UNESCO, found economic reasons as impelling force in rural urban migration.¹⁵

In their review of literature on motivation for migration, De Jong and Fawcett make separate observations for developing and developed countries.¹⁶ "The dominant motive for rural-urban migration in developing countries appears to be actual and expected economic returns. The attracting and facilitating influence of family and friends at urban areas of destination is also an important factor Evidence from literature indicates that social mobility and social status aspirations appear to have moderate influence, whereas residential satisfaction and life-style preference attainment are weaker motives for migration".

"In developed countries, short distance mobility appears to be strongly motivated by housing and neighbourhood residential satisfaction, with economic motive being relatively unimportant since a job change may not be involved. On the

¹⁵ UNESCO (1956) : The Social Implications of Industrialization and Urbanisation; Five Studies in Asia, Calcutta.

¹⁶ De Jong & Fawcett, op. cit, pp.39-41.

other hand, the estimated strength of the economic motive for migration continues to dominate long distance migration, The attainment of life style preference appears to be a relatively weak motive but is, perhaps, an increasingly important motive in migration decision making. The social status and social mobility motives also appear relatively weak, particularly when analytically separated from economic maximisation".

It is difficult to deny the inadequacies of the methodology and technique employed in the empirical studies conducted to ascertain the exact motivations behind migration. The influence of the causes other than economic may also not be negated. Even then, the findings of these empirical studies giving prime importance to 'economic reasons' behind migration, cannot be undermined. In fact, in the case of voluntary migration, if the migrant is not a student, a dependent of principal migrant, or a retired person etc, migration excluding economic reasons cannot even be imagined. Attainment of socio-cultural and other "aspirations" or "expectations" is not possible in an economic vacuum. They can be realised only when the foundation of economic base is laid.

6.2 Causes of Migration in India

According to Kingsley Davis, general wars and famines, ruthless taxation, diseases, religious festivals and commercial fairs accelerated the movement of population in the past. The development of means of transport and communication, educational facilities, the decline in the caste and family bonds, the growth of large scale industries, the development of cities, the expansion of irrigation and increase in security during British period reinforced this movement of population.¹⁷ Majumdar attributes migration to scarcity of cultivable land, family disputes, presence of friends and relatives in the city, decay of traditional crafts and hereditary occupations, attraction of city life, lack of employment opportunities commensurate with education at the native place, the desire for investment, official transfer, accompanying elderly migrants and political reasons.¹⁸ Loss of land, low income, inadequacy of land, better prospects for better job and life provided by modern science and technology, spread of education and development of means of mass communication are stated to be the reasons of migration by various studies.

¹⁷ Davis, Kingsley (1951) : The Population of India and Pakistan, Princeton, New Jersey, p.108.

¹⁸ Majumdar, D.N. (1960) : Social Contours of an Industrial City, Bombay, p.73.

With reference to Calcutta, Biplab DasGupta finds that Calcutta drew the largest population from outside and within the State during last centuries and two early decades of present century due to floods, famines, epidemics, political disaster, initiative from employer and his agents and contacts. The movements were greatly facilitated by the means of transport and communication.¹⁹ Similarly, analysing the trends and patterns of migration in metropolitan city of Bombay, P.K. Muttagi quoting a study conducted by Vatsala Narain and K.B. Gotpagar states that majority of migrants (62 per cent) come to Bombay due to economic reasons and rest (38 per cent) for education, marriage, accompanying family and friends, and for adventure, health and glamour.²⁰ Migration from rural areas of the State to Bombay city takes place due to proverbial poverty caused by rapid growth of population, backward and profitless agriculture and incidence of increasing unemployment and underemployment among rural youths. Social causes like higher and proper education, attraction of excitement and

¹⁹ DasGupta, B; (1984) : Issues of Migration and Employment with reference to Calcutta, in the proceedings of Bi-National Indo-Soviet Seminar on Problems of Migration in the process of Urbanisation, Osmania Univ., Hyderabad, 18-23 Sept.

²⁰ Muttagi, P.K; Trends and Patterns of Migration in Metropolitan Cities : A Case Study of Greater Bombay in the Proceedings of Bi-National Indo-Soviet Seminar on Problem of Migration in the Process of Urbanisation, op. cit.

thrills of city life and social stigma contribute a good deal towards it, states another study.²¹ In a type study of 'floating migration' from Marathi speaking rural Madhya Pradesh to Delhi metropolis, M.B. Deshmukh narrates that crop failure and scarcity conditions, loss in share cropping, uneconomic holdings, contacts, inadequate opportunities (artisan and crafts men), to avoid money lenders, to earn for the purchase of land, bullocks etc. family disputes, desire for town life etc. as the reasons for migration.²²

Citing evidence from Indian data, Connell et.al. observe that both "village based" and "urban based" factors induce migration. Land shortage, low fertility of land, skewed distribution of land, and resulting high proportion of landless agriculturists are major village based factors. Urban based factors include high degree of commercialisation of agriculture and higher percentage of produce sold to the towns. Literacy was also found to play a prominent role in accelerating migration.²³

²¹ Prabhu, P.N. (1956) : A Study on the Social Effects of Urbanisation on Industrial Workers Migrating from Rural Areas to the City of Bombay, in the Social Implications of Industrialisation and Urbanisation, UNESCO, Calcutta, pp.57-58.

²² Deshmukh, M.B., A Study of Floating Migration, Social Implications of Industrialisation and Urbanisation, op. cit. pp.180-181.

²³ Connell et.al. (1976) : Migration from Rural Areas, The Evidence from Village Studies, Oxford Univ. press, p.191.

6.3 Purpose and Causes of Migration from Kumaon

Being an origin based study, our enquiry for the purpose of this chapter is circumscribed by a number of limitations. At the first place, it covers only those migrants whose families or relatives stayed at the village and does not include cases where the whole family moved out. Secondly, responses regarding purpose, cause, duration and process of migration reported by the relatives of the migrants may be rationalised proxy or imaginary, particularly, in the cases where the respondents were wives and sons of the migrants who were not present at the time of migration. Even, the responses of the elder relatives may not be fully reliable as their perception may not be exactly the same as that of migrants. Thirdly, due to the reasons mentioned above, it was not possible to ascertain more than one reason for the move.

Within these limitations, we have attempted to ascertain the major purpose of migration in the case of all migrants. The specific reasons for movement are enquired in the cases of individuals migrating for economic purpose.

6.3.1 Purpose of Migration : Purposes of migration by time pattern are given in Table 6.1. The table reveals that majority of individuals (82 per cent) have moved for economic

Table 6.1 : Migrants by Time Pattern and Purpose
of Migration

Period of stay outside the native place (years)	PURPOSE															GRAND TOTAL No. %
	ECONOMIC			Business			Education			To ac- com- pany hus- band			To ac- com- pany par- ents			
	ser- vice	%	Total	%	Business	Total	%	edu- ca- tion	%	To ac- com- pany hus- band	%	To ac- com- pany par- ents	%	GRAND TOTAL No. %		
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Below 5 Years	53 (25.0)	77.9	-		53 (24.2)	77.9	4	5.9	6	8.9	5	7.3	15	22.1	68	100.00
5 - 10	45 (21.2)	88.2	3	5.9	48 (21.9)	94.1	1	2.0	1	2.0	1	2.0	3	6.0	51	100.00
10 - 15	52 (24.5)	72.2	-		52 (23.7)	72.2	3	4.2	12	16.7	5	6.9	20	27.8	72	100.00
15 - 20	25 (11.8)	75.8	1	3.0	26 (14.3)	78.8	3	9.1	4	12.1	-	-	7	21.2	33	100.00
20 - 25	19 (9.0)	82.6	1	4.3	20 (14.3)	86.9	1	4.3	2	8.7	-	-	3	13.0	23	100.00
25+	18 (8.5)	85.7	2	9.5	20 (28.6)	95.2	-	-	1	4.8	-	-	1	4.8	21	100.00
Total	212 (100.0)	79.1	7	2.6	219 (100.0)	81.7	12*	4.5	26	9.7	11	4.1	49	19.3	268	100.00

* 3 persons migrated for education found the job subsequently.

N.B. Figures in parenthesis denote percentages from vertical totals.

purpose and all of them are reported to be male by sex. 79 per cent have moved for service while 3 per cent have migrated to pursue some business or profession. The latter cases are not of those with any sizeable amount of capital sufficient to start some business or profession outside the region, but of those with certain skills. Out of total 7 persons who moved for this purpose, 3 were barbers and 2 were tailors. Both of the professions are mainly skill based rather than capital based and can be started by becoming an assistant or partner of some established shop in the beginning. The remaining two persons would have moved to find some job and would have accumulated some initial capital to start a tea stall or a small retail shop, or hawking business.

Remaining 18 per cent moved for the purpose other than economic include 4 per cent for education, 10 per cent to accompany husbands and 4 per cent to accompany the parents.

Table 6.1 indicate that the rate of migration has increased overtime. As on the date of enquiry (May-June, 1981), the proportion of migrants staying away from the native place for a period of less than 10 years comes to be 44.4 per cent, for 10 to 20 years 39.2 per cent and for 20 years and more 16.4 per cent only.

The table also reveal that, in earlier years, persons mostly used to migrate for economic purpose and with the intention to return back in older age. The main purpose of migration was to supplement the household income at the place of origin. So, the females and children did not accompany the migrants. Due to the abject poverty, people were hardly able to send their children outside for education. But in the later years, the phenomenon of females and children accompanying principle earner reflects that most successful migrants intend to settle in the cities. (Table 6.1 indicates that 66 per cent of those for educations, 73 per cent to accompany husbands and 100 per cent to accompany parents were away from their native place for the period of less than 15 years). It is, generally, found that persons migrated with females and children are less likely to return to the village because they find town life more attractive.²⁴ Migration for education has also become possible due to the migration for economic purpose. A student migrant either accompanies an earning migrant or moves elsewhere at his financial support.

6.3.2 Causes of Migration : Having discussed the purpose of migration, our next attempt is to analyse the underlying

²⁴ Connell, et.al, op. cit, pp.42-43.

causes behind the moves for economic purpose. In case of students, wives and children the causes may be common or identical in all the cases but it may not be so in the cases of economic motivations. These causes as reported by the relatives of the out-migrants at origin, are presented in Table 6.2.

The table reveals that 'inadequate income' is stated to be the reason behind the move of majority (61 per cent) of migrants. 18 per cent moved due to the 'non-availability of job commensurate to their qualifications'. 'Lack of local employment avenues' and 'non-availability of full time work' are stated to be the cause of migration for 14 and 6 per cent respectively. The proportion of those moving for other reasons e.g. transfer and attraction of 'bright lights' has been rather insignificant. In a study of the same region, Khanka found that the proportion of those moving for inadequate income was 91 per cent, for non-availability and partial availability of work 8 per cent and for other reasons only 1 per cent.²⁵ In a study of Indian Punjab, 65 per cent have migrated for better income/job, 27 per cent

²⁵ Khanka, S.S. (1984) : Migration from Kumaon Region : Some Findings Based on a Sample Study of Pithoragarh District, in the Indian Journal of Labour Economics, Vol. XXVI, January, p. 307.

Table 6.2 : Time Pattern and Causes of Migration

Period of stay outside the native place (years)	CAUSES*												TOTAL %
	1		2		3		4		5		6		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Below 5 years	33	61.1	1	1.8	9	16.7	10	18.5	-	-	1	1.8	54 (24.3)
5 - 10	26	54.2	5	10.4	11	22.9	6	12.5	-	-	-	-	48 (21.6)
10 - 15	33	62.3	3	5.7	11	20.7	6	11.3	-	-	-	-	53 (23.9)
15 - 20	14	51.8	3	11.1	5	18.5	4	14.8	1	3.7	-	-	27 (12.2)
20 - 25	14	70.0	1	5.0	4	20.0	1	5.0	-	-	-	-	20 (9.0)
25+	15	75.0	-	-	1	5.0	4	20.0	-	-	-	-	20 (9.0)
Total	135	60.8	13	5.8	41	18.5	31	14.0	1	0.4	1	0.4	222 (100.00)
	(100.0)		(100.0)		(100.0)		(100.0)		(100.0)		(100.0)		(100.00)

* 1. inadequate income; 2. non-availability of full time work; 3. work not available according to qualifications; 4. lack of local employment avenues; 5. attraction of bright lights; 6. transfer/promotion.

due to unemployment and partial employment and 8 per cent has moved due to other personal reasons.²⁶

6.4 Occupational Status at the Time of Migration

At the time of migration, about 51 per cent out-migrants were engaged in one or other occupation (Table 6.3). About 27 per cent had just completed their education and proportion of those totally unemployed was 22 per cent. By occupational status at the time of migration, 45 per cent were cultivators, 4 per cent labourers and 1 per cent were in salaried jobs. Other occupations being almost non-existent, agriculture is the mainstay of population in Kumaon hills. Due to the higher incidence of under and unemployment in low yielding traditional hill agriculture, major portion of migrants come from the class of cultivators. Due to virtual absence of secondary sector in the economy of Kumaon hills, labour class constitute a small fraction of the population in the form of seasonal agricultural labourers and construction workers. Seasonality of their employment pushes some of them out as it becomes difficult for them to make both ends meet

²⁶ Oberai, A.S. & Singh, H.K. Manmohan (1983) : Causes and Consequences of Internal Migration : A Study of Indian Punjab, Oxford University Press, p.64.

Table 6.3 : Occupational Status of Migrants at the Time of Migration by Time Pattern

Period of stay out- side the native place (Years)	OCCUPATIONS												TOTAL No. %	
	Agriculture			Labour			Services			Others				
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Below 5 Years	18 (18.2)	33.3	2 (20.0)	3.7	-	-	-	-	15 (24.6)	27.8	19 (39.6)	35.2	54 (25.3)	
5 - 10	16 (16.2)	33.3	5 (50.0)	10.4	1	2.1	-	-	15 (24.6)	31.2	11 (22.9)	22.9	48 (21.6)	
10 - 15	20 (20.2)	37.7	1 (10.0)	1.9	1	1.9	-	-	18 (29.5)	34.0	13 (27.1)	24.5	53 (23.9)	
15 - 20	14 (14.1)	51.8	1 (10.0)	3.7	1	3.7	-	-	7 (11.5)	25.9	4 (8.3)	14.8	27 (12.2)	
20 - 25	12 (12.1)	60.0	1 (10.0)	5.0	-	-	-	-	6 (9.8)	30.0	1 (2.1)	5.0	20 (9.0)	
25+	19 (19.2)	95.0	-	-	-	1	5.0	-	-	-	-	-	20 (9.0)	
Total	93 (100.0)	44.6	10 (100.0)	4.5	3 (100.0)	1.3	1 (100.0)	0.4	61 (100.0)	27.5	48 (100.0)	21.6	222 (100.0)	

at their native place. Some of the educated persons try their luck in local private schools in the beginning, even at the meagre remunerations. But when they realise that their conditions are not likely to improve for a long time to come, they migrate outside, whenever they get the opportunity. They prefer to join armed forced even in the lowest ranks. Persons having skills like hair cutting and tailoring also move if they get foothold in the towns because these jobs are more lucrative there rather than in the villages.

The proportion of those working and not working at the time of migration was lower in Indian Punjab in comparison to Kumaon but that of students was higher.²⁷ The intensity of intervening obstacles being greater in the case of Kumaon migration in number of cases does not take place immediately after completion of education. Therefore, the proportion of employed or unemployed goes up.

²⁷ *Ibid.* p.51.

Analysing the migrants by time pattern, we find that most of the migrants, in earlier year, were engaged in cultivation. Their proportion has progressively come down in recent years. The proportion which was 95 per cent before 25 years or earlier has come down to 33 per cent within the period of ten years. The earlier migrants being less educated and having lesser integration with towns used to keep their option open both for agricultural job and service, so used to participate in family agriculture till they got an opportunity to migrate. The recent migrants being better educated seem to be committed for outside job. Comparatively better information, communication and contacts in recent years have strengthened this process. Hence, they either migrate at the completion of their education or wait for an opportune time. Moreover, due to the lower pressure of population on resources the urgency to migrate was not so great in earlier times. The higher proportion of students and unemployed joining the migration stream in recent years indicates that the position of gainful employment has badly deteriorated in the region.

6.5 Process of Migration

In the context of the third world situation, much emphasis has been laid on kinship and other type of social networks playing major role in stimulating and directing of much of the population mobility. Collier and Green point out that not only kinship and ethnic networks but also those of workmates, neighbours, school masters and other friends from the same village or origin frequently have a critical influence in the decision to move or stay, the selection of destination, and the adjustment process at the destination.²⁸ Germani also observes that movements generally occur through well defined contact network.²⁹ These may be organisational networks whereby a villager moves to the city to attend an educational institution or take up a job with a government department, the army or a modern sector organisation. Alternatively, there may be kinship or friendship channels. Such channels have been shown to be particularly important

²⁸ Collier, P. and Green, J.M. (1978) : Migration from Rural Areas of Developing Countries : A Socio-Economic Approach, in Oxford Bulletin of Economics and Statistics, pp. 23-35.

²⁹ Germani, G., op. cit.

in third world countries.³⁰

Ethnic and kinship connection hypothesis is based on the belief that these networks are effective in taking care of the basic needs of migrants immediately after their arrival in the city, in securing the job for them and in providing the social and emotional support to them. Most of the studies conducted in third world countries indicate that such networks have greater importance for uneducated or less educated migrants, mainly, looking for manual work in factories and construction works and primary needs of those are to be financed by friends and relatives in the initial stages.

About 80 per cent of the movers in our sample are reported to be own account migrants (Table 6.4). These own account migrants belong to three different categories: (i) those who got civilian job (mostly government job) through direct recruitment; (ii) those who joined armed

³⁰ Hugo, Graeme, J. (1981) : Village Community Ties, Village Norms, and Ethnic and Social Networks : A Review of Evidence from the Third World, in Migration Decision Making, (eds.) De Jong Gorden, F. and Gardner, Robert W, Pergamen Press, p.209.

Table 6.4 : Mode and Process of Migration

	Number	Percentage
I. <u>Own Account</u>		
i. On getting civilian job	54	24.3
ii. Recruitment in armed forces	59	26.6
iii. In search of job	65	29.3
TOTAL	178	80.2
II. <u>Accompanying Friends and Relatives</u>		
i. Family members	23	10.4
ii. Others	21	9.4
TOTAL	44	19.8
GRAND TOTAL	222	100.0

forces through mobile and stationary recruitment centres; and (iii) those who left their native place in search of a job. The first category constitutes about one-fourth of total migrants while the second constitutes a little larger than one-fourth. The largest group belongs to the third category which constitutes a little less than one-third of the total migrants. A good number of migrants belonging to third category might have also availed the help and support from ethnic and friendship net work, though not of an overt nature, at the destination but this could not be ascertained at origin due the limitations mentioned earlier. Kumaonis mostly aspire for government job for the reason of security of job and prestige involved with it. Hence, most of them try for white collar and fourth class jobs in the government organisation. For better educated persons and those joining armed forces, kinship network matters less. Persons recruited in armed forces have not to aspire for any kind of help from other quarters. About such migrants Hugo observes : "The majority of those without personal contacts were persons on army, government

or educational transfer and hence were moving via bureaucratic rather than kinship network".³¹

The second group of migrants belongs to those who moved accompanying friends and relatives. They constitute the 20 per cent of the total migrants (Table 6.4). 10.4 per cent of them have accompanied their family members while 9.4 per cent have moved with friends and other acquaintances. Majority of migrants belonging to this group were relatively poor, less or uneducated and were engaged in minial jobs at the place of work. Meagre financial resources at their disposal and limited/lower capacity to integrate with outside people forced them to take support from friends and relatives. Moreover, such persons need more social and emotional support too.

6.6 Job Prospects at the Time of Migration

Geographical hazards, socio-cultural distances and general poverty due to economic backwardness pose greater obstacles in the way of Kumaoni migrants. Hence, a large number of individual move only when the job is fixed. Table 6.5 reveals that 51 per cent persons have left their native

³¹ Hugo, Greame, J., op. cit.

Table 6.5 : Job Prospects at the Time of Migration

	Number	Percentage
1. Job fixed before migration	113	50.9
2. Job assured on migration	41	18.5
3. In the hope of getting jobs after migration	68	30.6
TOTAL	222	100.0

place when the job has been ensured to them. Next 18 per cent have moved on the assurance of job after migration. They were mostly the relatives and friends of prior migrants. Those moved in the hope of getting job without any direct and agreed support from any quarter accounted 31 per cent. It is just possible that they might have obtained some kind of support from their ethnic group at the destination but it may not be of an overt nature. Such migrants include poor illiterate and relatively economically better-off educated both. These migrants may be placed in the category of "trail blazers" endowed with the qualities of adventuresomeness, entrepreneurial acumen and willingness to take risks.³²

³² Hugo, Gream, J., op. cit., pp. 212-213.

6.7 Conclusions

The purpose of migration from the region has, mainly, been economic as 32 per cent of out-migrants have moved with this objective in view. Proportion of such migrants has increased overtime. Migration is found to be permanent and semi-permanent in nature. In earlier periods, it used to be mostly semi-permanent as single migrants used to return after the completion of service but in recent years, a gradual shift towards permanent migration is observed with the phenomenon of wives and children accompanying principal migrants making the return less likely.

In majority of cases, inadequate income at the place of origin is the main cause of migration followed by non-availability of job commensurate with qualification of migrant, lack of local employment avenues and under-employment.

By occupational status, majority (51 per cent) of migrants were engaged in one or other occupation at the time of migration, while 27 per cent had just completed their education, 22 per cent were totally unemployed.

As regards process of migration, four-fifth of total migrants were own account migrants, and it were only one-fourth who were assisted by friends and relatives.

Job prospects at the time of migration were ensured in majority of cases. In case of 50 per cent of migrants, jobs were ensured before hand and about one-fifth were assured job at migration. It were about one-third who moved away in random fashion in the hope of obtaining jobs.

CHAPTER VII

Spatial and Occupational Pattern of Migrants and Links with Origin

7.1 Destination : Some Views

In a study of migration in the United Kingdom between the Census of 1871 and 1881 and of the data on migration pertaining to more than twenty countries, Ravenstein observed several empirical regularities which he called laws. Five of his seven laws are directly related to destination and distance with relation to migration. His laws are as follows:¹

- "i) The great body of our migrants only proceed a short distance;
- ii) Migrants enumerated in a certain centre of absorption will consequently grow less with the distance proportionately to native population which furnishes them;
- iii) The process of dispersion is the inverse of that of absorption and exhibits similar features;
- iv) Each main current of migration produces a compensating counter current;
- v) Migrants proceeding long distances generally go by preference to one of the great centres of commerce and industry;

¹ Ravenstein, E.G (1885) : The Laws of Migration, Journal of Royal Statistical Society, 48, Part 2, pp.167-235; and (1889) : op. cit, 52, June, pp.241-305.

- vi) An increase in the means of locomotion and development of manufacturing and commerce have led to increase in migration; and
- vii) Bad and oppressive laws, heavy taxation, an unattractive climate, uncongenial social surroundings, and even compulsions all have produced and are still producing currents of migration, but none of these currents can compare in volume with that which arises from the desire inherent in most men to "better" themselves in material respects."

Commenting on the thesis of Ravenstein, Oberai and Singh observe that "Ravenstein's basic laws have since been discussed, systematised and expanded by a number of researchers, but the importance of economic motive in the decision to migrate, the negative influence of distance, and the role of step migration suggested by him are some of the important features which have not been invalidated.² In their review of literature on migration, Connell et.al. observe that Ravenstein's thesis has withstood much empirical testing. But quoting evidence from Indian data they observe that people living in the places very near to towns prefer commuting to migration. They agree that further distance does deter migration.³

² Oberai, A.S. and Singh, H.K. Manmohan (1983) : Causes and Consequences of Internal Migration : A Study in the Indian Punjab, Delhi, Oxford University Press, p.25.

³ Connell, et.al (1976) : Migration from Rural Areas : The Evidence from Village Studies, Delhi, Oxford University Press, pp.72-73.

Cost is supposed to be deterrent to long distance migration⁴ as an income of a certain minimum level is necessary for the migration to take place.⁵ Non-financial costs such as cultural and social gaps are supposed to be equally important in reducing the rate of long distance migration.⁶ Costs in terms of foregone income and increased cost of living is found to be more important in restricting the rate of migration rather than distance.⁷ Lee conceptualises these costs as intervening obstacles. The force of impediments facing migrant, physical, financial or psychic increases with distance.⁸ Intervening obstacles play prominent role, particularly, in the case of international migration in the form of heavy fixed costs, and immigration restrictions and controls.⁹

⁴ Schultz, T.P : "Rural-Urban Migration in Colombia", Review of Economics and Statistics, 53(2), pp.157-163.

⁵ Friedlander, S.L. (1955) : Labour Migration and Economic Growth : A Case Study of Puerto Rico, Cambridge (Mass), pp.37-40.

⁶ Greenwood, M.J. (1971) : An Analysis of the Determinants of Internal Labour Mobility in India, Annals of Regional Science, 5 June 1971, pp.131-151 & JP Mangalam (1968) : Human Migration, Lexington.

⁷ Speare, A.P. (Jr.), (1974) : Urbanisation and Migration in Taiwan, Economic Development and Cultural Change, 22(2), p.306.

⁸ Lee, E.S. (1969) : A Theory of Migration, in J.A. (ed.), Migration, Cambridge (Mass), pp.282-297.

⁹ Connell, et.al, op. cit, pp.73-74.

Another major factor which deters the long distance migration is information gap. Information flows do not reach out equally to all members of rural society and this gap leads to much of the misdirected migration. Relations are usually main source of information.¹⁰ Personal resource network (relations and friends) is considered to be an important source of securing employment, due to this very reason migrants from a locality tend to "bunch" in their choice of destination.¹¹ This factor over-rides the intervening opportunities and disturbs the optimal distribution of migrants from rural areas. It has also been observed that deterrent effect of distance declines with education.¹²

As regards the role of means of communication in migration, it is observed that good transport system encourages emigration from the villages more than the development of villages. It facilitates migration from physically

¹⁰ Ibid, pp.75-210.

¹¹ Anderson, J.A. (1972) : Social Strategies in Population Change : Village Data from Central Luzon, South-East Asia Development Advisory Group, Paper No.15, New York, Asia Society, p.14.

¹² Levy, M.B. and Wadeycki, W.J. (1974) : What is the Opportunity Cost of Moving : Reconsideration of the Effects of Distance on Migration, Economic Development and Cultural Change, 22(2), pp.198-214.

remote places without complete severance with native place and people.¹³ In early stages of urbanisation, nearby villages are the main supplier of the migrants to the towns, remote villages are affected gradually when the stock of nearby villages is exhausted. Nearby villagers prefer commuting rather than migration to avoid increased cost of living. Thus, it is argued, that the distance deters migration needs to be modified.¹⁴

Other things remaining the same, migrants have the tendency to avail the nearest opportunities at the first instance. Stouffer hypothesised that "The number of persons going a given distance is directly proportional to the number of opportunities at that distance and inversely proportional to the number of intervening opportunities".¹⁵ But at times, migrants overlook nearby opportunities for better wages at distant destination.¹⁶ Nevertheless, Connell et.al. conclude that "The density of intervening opportunities reduces distant migration, and can change distance pattern overtime."¹⁷

¹³ Abou-Zeid, A.H. (1963) : Migrant Labour and Social Structure in Kharga Oasis, in J Pitt-Rivers (ed.), Mediterranean Countrymen, Paris, Mouton, p.46.

¹⁴ Connell, et.al, op. cit, p.77.

¹⁵ Stouffer, S.A. (1940) : Intervening Opportunities: A Theory Relating Mobility and Distance, American Sociological Review, 5, pp.845-867.

¹⁶ Connell, et.al, op. cit, p.74.

¹⁷ Ibid, p.206.

ziph,¹⁸ Carrothers¹⁹ and Isard²⁰ etc. have propounded a "gravity model" of migration based on the law of gravity. It suggests that people move as if they were drawn to other people by a force that diminishes with distance. It is useful as empirical law about the relative volumes of migration streams but fails to provide any more understanding of migration patterns than that provided by Stouffer's model. It cannot be used to explain why migration rates vary with the characteristics of migrants, duration of residence and variation in cultures.²¹

Regarding distance a good deal has already been said in migration literature and it has generally been observed that distance deters migration. Yet, it is not still clear as to what factors influence the distance in a specific migration

¹⁸ Ziph, G.K. (1946) : The $P_1 P_2 / D$ Hypothesis : On Intercity Movement of Persons, American Sociological Review, 20 : 218-224.

¹⁹ Carrothers, G.A.P. (1956) : An Historical Review of the Gravity and Potential Concepts of Human Interaction, Journal of the American Institute of Planners, 20, pp.94-103.

²⁰ Isard, Walter, (1960) : Methods of Regional Analysis : New York, John Wiley and Sons.

²¹ Speare, et.al, Residential Mobility, Migration and Metropolitan Change, Cambridge Mass, p.165.

pattern : "Whether distance is acting as a proxy for costs, for lack of information or for an increasing number of intervening opportunities".²² Perception of distance itself is not fixed due to constantly changing conditions e.g. reduced costs and time; better information due to improved communication; physical expansion of urban areas,²³ and advancement of education, science and technology.

Choice of destination is largely determined by the type of migration - seasonal, circular or permanent in which the villagers intend to participate.²⁴ Seasonal migration streams are mainly rural to rural involving rural poor. Sometimes, well to do people also join this stream to colonise the virgin lands. Rural to urban flows are not much stronger, and are mainly joined by poor educated persons concentrating on capital towns, and gradually proceeding towards larger cities by 'step migration' in furtherance of their interests.²⁵

²² Connell, et.al, op. cit. p.78.

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid. p.207.

7.2 Destination and Migration from Kumaon

By destination, here, we mean the present place of residence of the migrants. In pre-testing of our questionnaire, it was found that most of the respondents at origin were not in a position to inform as to where the migrants went in the beginning. So the question regarding 'step migration' could not be incorporated in our study. Secondly, all migration in our analysis is treated as rural to urban. About 10 per cent of the migrants who are not currently in the urban areas are not really in the rural based jobs but were working as school teachers, extension and office workers. Members of armed forces, even if currently located in a non-urban area, may also not be treated as rural to rural migrants.

Information regarding destination is furnished in Table 7.1. The table reveals that the proportion of those who have joined armed forces is the highest (28 per cent) followed by those (one-fourth) who have crossed the limits of the state - about 19 per cent to neighbouring states and 6 per cent to other states. Among intra-state movers (46.5 per cent of total out-migrants) the largest proportion (18 per cent) have gone to other than contiguous districts of the state followed by those (17 per cent) who have gone to contiguous districts. Intra-district movers

Table 7.1 : Present Place of Residence by Educational Status

Place of Residence	TIIliterate	Educational Status						TOTAL			
		Primary and below	Primary and above	Below matric	Graduate and above	Graduate and above	Matric	No.	%	No.	%
1. Within the district of birth	1 (6.2)	3.7 (7.5)	4 (24.6)	14 (7.3)	51.8 (14.3)	6 (12.2)	22.2 (27.4)	2 (4.2)	27 (100.00)	2 (4.2)	27 (100.00)
2. Contiguous district with in the state	3 (18.7)	8.1 (22.6)	12 (12.3)	32.4 (15.8)	18.9 (14.3)	7 (16.7)	35.1 (14.3)	2 (5.4)	37 (100.00)	2 (5.4)	37 (100.00)
3. Other districts of the state	5 (31.2)	12.8 (9.4)	5 (14.0)	12.8 (14.0)	8 (19.5)	8 (19.5)	41.0 (35.7)	5 (12.8)	39 (17.6)	5 (12.8)	39 (17.6)
4. Neighbouring states	2 (12.6)	4.9 (28.3)	15 (14.0)	36.6 (14.0)	8 (14.6)	19.5 (14.6)	29.3 (28.6)	4 (9.8)	41 (18.5)	4 (9.8)	41 (18.5)
5. Other States	2 (12.6)	14.3 (13.2)	7 (1.7)	50.0 (1.7)	1 (4.9)	7.1 (4.9)	28.6 (28.6)	- (-)	- (-)	- (-)	- (-)
6. Armed forces	3 (18.7)	4.8 (17.0)	9 (17.0)	14.5 (31.6)	18 (37.8)	29.0 (7.1)	50.0 (7.1)	1 (1.6)	62 (27.9)	1 (1.6)	62 (27.9)
7. Not known	- -	- (1.9)	50.0 (1.9)	1 (1.7)	50.0 (1.7)	- (-)	- (-)	- (-)	- (-)	- (2)	- (0.9)
TOTAL	16 (100.0)	7.2 (100.0)	53 (100.0)	23.9 (100.0)	57 (100.0)	25.7 (100.0)	82 (100.0)	36.9 (100.0)	14 (100.0)	6.3 (100.0)	222 (100.0)

constitute only 12 per cent of the total out-migrants. Place of current residence of two migrants, was not known.

The proportion of total persons joining armed forces is high (28 per cent) from the region, but it is still higher (42 per cent) from remote villages. The majority (53 per cent) of total joining armed forces have come from the remote villages of the region. It indicates that abject poverty and hardship at the origin; lack of information about the opportunities elsewhere and lack of kin network; uncertainties in the urban centres; and cost of conveyance etc. impell them to join armed forces which provide them stable and secured job at their door steps through mobile recruiting offices. Tendency of going to capital towns, district headquarters and other administrative towns among most of other out-migrants exhibits that they aspire for government jobs. About 88 per cent of those who have gone to other states were located in Delhi metropolis which accommodates the maximum number of commercial establishments also. Inter-district out-migrants have mostly gone to Nainital, Haldwani, Lucknow, Kanpur, Bareilly, Agra, Ghaziabad etc. Bulk of them (36 percent) have gone to Lucknow, the State capital of Uttar Pradesh.

Analysis of 1961 Census data reveals that proportion of out-migrants (including all out-migrants) decreases with distance (Table 4.19). But the law 'distance deters migration' does not seem to apply to the migration for economic reasons. Our data reveals that out-migrants are not deterred by the distance and their proportion has gone increasing till they have crossed the boundaries of the neighbouring states. The proportion of those going beyond neighbouring states is reduced considerably (Table 7.1). This is, perhaps, the point from where Ravenstein's law regarding distance seems to become operative. 'Bunches' of migrants pouring on in Delhi, Lucknow and other administrative towns is indicative of wider kin-network in these towns and lesser intervening opportunities enroute.

7.2.1 Destination and Education

We have already noted earlier that migration from the region is educationally selective, and the proportions of migrants increase with educational levels (Table 5.4). So, overwhelming proportion of our migrants are educated, and only 7 per cent of them are illiterate (Table 7.1). Educational levels of migrants are represented as 24 per cent primary and below, 26 per cent above primary upto matric, 37 per cent above matric below graduate and 6 per cent graduate and above.

Dispersal of migrants by education over the space indicates that illiterates and less literates are not shy in going to long distances. They have, infact, out numbered better educated migrants in doing so. Migrants with the educational levels of graduation and above have not gone beyond the neighbouring states. The highest percentage among those, who have gone to other states of the country is that of primary and below followed by illiterates. Thus, our migrants invalidate the observation that the deterrent effect of distance declines with education.²⁶ Illiterates or less literates do not mind to takeup any kind of job in the beginning so that they may continue in the urban areas and may continue their efforts to get the job of their choice in future.²⁷ On the contrary, better educated have definite jobs in mind, and if such jobs are not available soon after migration, they find it difficult to wait for long without the support of relatives and friends, who are scarcely available at distant places. Just half of those who have joined armed forces are above matric and below graduate. This, perhaps, is the most attractive among the menial jobs and also provides better promotional avenues. Rest of them are divided among the administrative head-quarters of divisions, state and country where lower level

²⁶ Levy, M.B. & Wadycki, W.J., op. cit.

²⁷ Cf. Upreti, H.C. (1981) : Social Organisation of a Migrant Group, Bombay, p.123.

white collar and even fourth class jobs engage them. Bulk of the graduates and above, have moved to other districts of the state and neighbouring states for the reason that only cities like Delhi, Lucknow, Kanpur etc. could provide the jobs commensurate to their qualifications and aspirations. They have not moved beyond that due to the reason mentioned above.

7.2.2 Destination and Period of Migration

Table 7.2 reveals that overall rate of migration from the region has increased overtime. The proportion of those who have left their native place within a period of less than 10 years, was 46 per cent while of those who left between 10 to 20, years was 36 per cent and those who left prior to that was only 18 per cent. Though a good deal of return migration from armed forces cannot be ruled out (armed forces personnel start returning after 15 years of service in case they do not get promotion), yet constant increase in rate of migration over the period to other destinations establishes that overall rate of migration has a tendency to increase overtime.

The table also reveals that intra-district rate of out-migration and to that of armed forces has decreased within a span of ten years after the initial increase, while it

Table 7.2 : Destination by period of migration

Place of Residence	Period of Migration (years)												TOTAL					
	Below 5			5 - 10			10 - 15			15 - 20			20 - 25			25+		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1. Within the district of birth	4	14.8	6	22.2	7	25.9	3	11.1	3	11.1	4	14.8	27	100.00				
	(7.4)		(12.5)		(13.2)		(11.1)		(15.0)		(20.0)		(12.1)					
2. Contiguous district	10	27.0	8	21.6	8	21.8	4	10.8	4	10.8	3	8.1	37	100.00				
	(18.5)		(16.7)		(15.1)		(14.8)		(20.0)		(15.0)		(16.7)					
3. Other districts of the state	13	33.3	8	20.5	7	17.9	5	12.8	3	7.7	3	7.7	39	100.00				
	(24.1)		(16.7)		(13.2)		(18.5)		(15.0)		(15.0)		(17.6)					
4. Neighbouring states	13	31.7	11	26.8	7	17.0	5	12.2	1	2.4	4	9.8	41	100.00				
	(24.1)		(22.9)		(13.2)		(18.5)		(5.0)		(20.0)		(18.5)					
5. Other states	4	28.6	3	21.4	2	14.3	1	7.1	2	14.3	2	14.3	14	100.00				
	(7.4)		(6.2)		(3.8)		(3.7)		(10.0)		(10.0)		(6.3)					
6. Armed forces	10	16.1	11	17.7	22	35.5	8	12.9	7	11.3	4	6.4	62	100.00				
	(18.5)		(22.9)		(41.5)		(29.6)		(35.0)		(20.0)		(27.9)					
7. Not known	-	-	1	50.0	-	-	1	50.0	-	-	-	-	2	100.00				
			(2.1)				(3.7)						(0.9)					
TOTAL	54	24.3	48	21.6	53	23.9	27	12.2	20	9.0	20	9.0	222	100.00				
	(100.0)		(100.0)		(100.0)		(100.0)		(100.0)		(100.0)		(100.0)					

has constantly increased to other destinations. It implies that the employment opportunities within the district has not kept pace with the growing population, and the need of personnel in armed forces has also decreased. Periods around two wars - Indo-Pak War 1965 and Bangladesh War 1971 - witnessed heavy recruitment in armed forces. The table clearly establishes that with every increase in the recruitment in armed forces migration to other destinations, particularly, outside the district decreases.

7.3 Present Occupations of Migrants

The highest proportion (28 per cent) of migrants have joined the armed forces (Table 7.3). This may be attributed to twin reasons : firstly, the job is fixed at the origin itself and it saves the migrants from inconveniences and from incurring cost of conveyances etc; secondly, savings can be made to the extent of full salary of the month which can be remitted for the support of the family.

One-fourth of the migrants were engaged in class four jobs (including peons, dafteries, drivers, chowkidars etc.) in government, semi-government and a few private organisations. Another, a little over one-fifth were engaged in other minial jobs such as police (2 per cent), personal

Table 7.3 : Present Place of Residence and Present Occupation

Occupations	Place of Residence										TOTAL No. %
	Within the district		Contiguous district		Other Neighbour- ing States		Armed forces		Not Known		
	State	No.	%	No.	%	No.	%	No.	%	No.	%
1. Forces Personnel	-	-	-	-	-	-	-	-	-	-	-
a. Army	-	-	1	20.0	1	20.0	2	40.0	1	20.0	-
b. Police	-	-	(2.7)	(2.6)	(2.6)	(2.6)	(4.9)	(7.1)	(7.1)	(100.0)	-
2. Administrative & Clerical workers	5	16.1	6	19.3	10	32.3	9	29.0	1	3.2	-
3. Ministerial workers	14	25.0	(16.2)	(25.6)	(25.6)	(21.9)	(7.1)	-	-	-	(27.9)
4. Teachers & Extension workers	5	45.4	(45.9)	(25.6)	(25.6)	(17.9)	10	17.9	5	8.9	-
5. Technical workers	1	8.3	2	16.7	3	16.7	2	16.7	1	8.3	-
6. Personal Service & Domestic servants	2	18.2	(7.4)	(5.4)	(5.4)	(2.6)	(4.9)	(7.1)	(7.1)	(100.0)	-
7. Hotel and Restaurant workers	-	-	-	2	50.0	-	-	2	50.0	-	-
8. Manufacturing workers	-	-	(5.4)	(5.4)	(5.4)	(4.9)	(4.9)	(7.1)	(7.1)	(100.0)	-
9. Sales workers	-	-	(8.1)	(12.8)	(12.8)	(14.6)	(14.6)	(14.3)	(14.3)	(100.0)	-
10. Others	-	-	(2.6)	(2.6)	(2.6)	(2.4)	(2.4)	(2.4)	(2.4)	(1.8)	-
TOTAL	27	12.2	37	16.7	39	17.6	41	18.5	14	6.3	62
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

N.B. : Others include those whose occupations are not known.

services and domestic servants (5 per cent), hotel boys (2 per cent), manufacturing workers (4.5 per cent), and sales workers (7 per cent). Of about 2 per cent, occupations were still not decided as either they were searching for jobs or no information was available about them. In all, 46 per cent migrants were engaged in petty or menial jobs. Only 24 per cent are in what can be regarded as white collar jobs. They included administrative and clerical workers (14 per cent); teachers and extension workers - V.L.W., A.D.O, Panchayat Secretary etc. (5 per cent); and technical workers - draughtsmen, mechanic, fitters, electricians etc. (5 per cent). None of the white collar migrants belonged to officer or supervisory cadre. Occupational levels of migrants at the destination also reflect not only economic but social and political backwardness of the origin.

Majority of clerical workers were found to be working in other districts of the State and neighbouring states i.e. they were mainly divided between Lucknow and Delhi. The tendency among class four workers has been to move as short as possible, if they get the opportunity to do so. In case they fail, they have not shown any hesitation in going to far off places also. The degree of mobility seems to be lowest in the case of teachers (teaching at lower levels)

and extension worker, since bulk of them have remained concentrated within their home district and none of them have crossed the boundaries of the home state. It seems that jobs involving greater public contacts are less likely to be had at distant places due to variation in language, social customs and cultural practices. The migrants who fail to get in the armed forces and class four jobs due to illiteracy or for any other reasons, take up personal services and domestic services. They, mainly, find the jobs where the affluent classes live. Majority of them have moved to cities like Delhi and Bombay. The case with hotel boys is also almost similar. Manufacturing and sales workers did not find any berth within the district of birth, obviously, for the reason that such units within the district did not possess any significant capacity to employ paid workers. Nearly, half of them have also been located outside the state. Among sales workers located within the state, were, mostly, the petty shopkeepers or tea-stall owners. Manufacturing and sales workers have either been promoted from domestic servants and hotel boys or have got inducted by the kin network.

7.3.1 Occupations and Period of Migration

Percentage of clerical workers has increased overtime with a declining trend in very recent period (Table 7.4).

Table 7.4 : Occupations by Period of Migration

This decline may be attributed to the keen competition for these jobs due to growing unemployment, and increasing proportion of other white collar jobs such as teaching and extension works. As a result, their proportion in relation to total migrants moving away in different periods of time has come down in later years in comparison to earlier years.

Proportion of migrants going to fourth class jobs, has constantly been increasing overtime. The reasons for this trend may be manifold : decline in armed forces recruitment; marginally educated for white collar jobs accepting lower jobs due to their inability to compete for higher jobs and growing distress at the place of origin.

Teachers, extension workers and technical workers among out-migrants, not significant in number, are of recent origin and were not visible two decades ago. While the percentage of teachers and extension workers shows a slow but steady increase, migrants going to technical jobs have completely disappeared in recent years. It seems that with the growing competition in the field of technical jobs due to the expansion of upgraded technical institutions elsewhere, hill migrants are now unable to make any further break-through in this field.

Overtime, the proportion of migrants working as personal service workers, domestic servants and hotel boys has increased. Sales workers have also increased significantly within last 10 years. It indicates that jobs in government have not increased proportionately or migrants from hills have become less able to get entry to them.

The proportion of white collar workers was 15 per cent among those who migrated more than 25 years ago. The proportion is 30 per cent among those migrating more than 20 years ago, and among those migrating during the last 15 years, it is 20 per cent. On the other hand, the proportion of those accepting the menial jobs (including armed forces) have fluctuated over the years with a rising tendency in recent years.

Inspite of the long tradition of migration, the overall capacity of securing better jobs has declined on the part of Kumaoni migrants.

7.3.2 Occupations and Annual Income of the Migrants

Our data regarding the annual income of the out-migrants at the place of their present residence have serious limitations in so far as they have been collected from the heads of households at origin. Still, since a

Table 7.5 : Annual Income by Occupations

vast majority of the migrants kept in close touch with their family at origin, as is evident from regular remittances and visits, it could be assumed that the information given by the heads of household at origin would not be wholly unreliable.

Information regarding income levels of migrants during 1980-81 in different occupations is given in Table 7.5. The table reveals that 45 per cent of out-migrants had an annual earnings of less than Rs.5,000. All the hotel and restaurant workers, 80 per cent of manufacturing workers, 75 per cent of class four workers, 74 per cent of personal servicemen and domestic workers and 45 per cent of teachers and extension workers fall in this category. The beginners in other occupations also fall in this category. A little more than 4 per cent among these workers earn even less than Rs.3,000 annually. It is possible, however, that many of them have been the recipients of free boarding and lodging from the employers. About 28 and 18 per cent of the workers earn an income between Rs.5,000 and Rs.7,000 and Rs.10,000 respectively. Most of forces personnel, clerical, technical and extension workers and teachers belonged to this category. Seven percent had an income of Rs.10,000 and above; they include one third of technical

workers; 11 per cent of forces personnel who got promoted to junior commissioned ranks; and 13 per cent of clerical workers with relatively long periods of service. None of the migrants have touched the mark of Rs.15,000 of annual income.

Annual average income of all migrants during 1980-81 estimates to Rs.5,467; and of a working migrant Rs.5,568, yielding monthly averages of Rs.455 and Rs.464 respectively.

7.4 Remittances

Since remittances involve transfer of cash or other resources from the migrant to his family members and other relatives at the origin, they have number of implications from the perspective of migrant, recipient villagers and development in rural areas. Remittances may raise rural income and consumption; encourage technological change thereby accelerate further rural income and so on and so forth. In what follows, in this chapter, we attempt an analysis of the size and frequency of remittances and the characteristics of migrants who remit. In our study remittances include cash remitted by post or any other means and also the value of goods sent or brought during visits.

7.4.1 Size of Remittances

About 85 per cent of total migrants and 87 per cent of earning migrants sent remittances to their families and relatives during 1980-81. The total amount remitted in cash was Rs. 3.16 lakhs i.e. 26 per cent²⁸ of the total earnings of out-migrants (Table 7.6). Per migrant remittances were Rs. 1,423 per annum by taking into account all earning migrants; and were Rs. 1,672 by taking into account the remitting migrants only. Average size of remittances is found to increase with rising income levels, though the proportion of remittances declines with higher income. Most of the out-migrants at the lower income levels belong to very poor families and thus the needs for cash to their relatives even for food and other necessary consumption items is generally greater. Such migrants try to remit the greater part of their earnings even at the cost of their own standard of living and quality of life. On the other hand, migrants on higher income groups, particularly white collar migrants, have to spend a good portion of their income in their own upkeep, and have to maintain a minimum standard of life. Another significant reason for

²⁸ In the study of 16 North Indian villages (based on the data collected in 1950's and early 1960's) the amount remitted by migrants ranged from 26 per cent to 69 per cent of migrants income. (Connell, et.al, op. cit, p.92).

Table 7.6 : Size of Income and Remittances

Income classes (Rs.)	Total income (Rs.)	Average income (Rs.)	Total amount remitted (Rs.)	Average size of remittances (Rs.)	Remittances as percentage of total income	
Below 3000	3000	22400	2240	6700	670	30.0
3000 - 5000	354700	3941	103700	1152		29.2
5000 - 7000	357000	5679	101400	1609		23.3
7000 -10000	317500	7744	77300	1885		24.3
10000-12000	60800	10133	5200	867		8.5
12000+	100572	12571	21700	2712		21.6
TOTAL	1213772	5467	316000	1423		26.0

reduction in the proportion of remittances with increased income seem to be that the remittances are sent to meet the specific needs only. Since, extension and improvement in hill agriculture is difficult due to topographical reasons, and opportunities for investment in other sectors are also bleak, households require cash simply to meet their needs e.g. food, clothing, school fees and other social needs. In addition to this, migrants who keep their families with them (most of our migrants in income group 10,000-12000 belong this category) remit less both in frequency and volume. It indicates that remittances are related to income levels, as well as more generally to the ties with the villages.²⁹

7.4.2 Characteristics of Remitting Migrants

Data regarding the remitting migrants by their demographic, social and economic characteristics are given in Table 7.7. Nature of relationship and the type of responsibility the out-migrant owes to the head of the household, seems to play major role in deciding to remit. Table 7.7 reveals that while all the husbands, fathers and brother-in-

²⁹ Bienefeld, M.A. (1974) : The Self-Employed of Urban Tanzania, IDS Discussion Paper 54, IDS, Brighton, pp.32-33.

Table 7.7 : Remittances by Demographic, social and economic characteristics

Characteristics	total out- migra- nts	Migrants having remitted				Brought in kinds at Visits		
		Regularly		Occasionally		No.	%	
		No.	%	No.	%			
0	1	2	3	4	5	6	7	8
1. Relationship with the head of household at origin								
I. wife	39	100.0		33	84.0	6	15.4	9
II. Mother	36	72.2	20	76.9	6	23.1	5	13.9
III. Father	81	62	37	59.7	25	40.3	13	16.0
IV. Brother	42	41	23	56.1	18	43.9	8	19.0
V. Son/Daughter	12	12	12	100.0	-	-	5	41.7
VI. Sister-In-Law	5	5	1	100.0	5	100.0	-	-
VII. Others	7	4	1	57.1	3	75.0	-	-
2. Family status at the place of residence								
I. with family/ dependents	19	62.1	5	27.9	13	72.2	4	13.8
II. Single	193	38.6	121	70.9	50	29.2	36	13.6
3. Education								
I. Illiterate	16	11	68.7	7	63.6	4	36.4	4
II. Primary & below	53	42	79.2	31	73.0	11	26.2	14
III. Below matric above primary	57	55	96.5	36	65.4	19	34.5	6
IV. Below graduate above matric	92	68	82.9	42	61.8	26	38.2	13
V. Graduate & above	14	13	92.9	10	76.9	3	23.1	3

Contd...//

Table 7.7 Contd.

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	0	1	2	3	4	5	6	7	8	9
4. Present place of residence										
I. Within the district of birth	27	26	96.30	20	76.90	6	23.10	2	7.40	
II. Contiguous district	37	32	86.50	27	84.40	5	15.60	8	21.60	
III. Other districts of the State	39	29	74.30	17	58.60	12	41.40	7	17.90	
IV. Neighbouring State	41	31	75.60	17	54.80	14	45.20	12	29.30	
V. Other States	14	11	78.60	5	45.40	6	54.50	4	28.60	
VI. Armed forces	62	60	96.80	40	66.70	20	33.30	7	11.30	
VII. Not known	2	-	-	-	-	-	-	-	-	-
5. Period of Out-migration (Yrs)										
I. Less than 5	54	43	79.60	25	58.10	18	41.90	8	14.80	
II. 5 - 10	48	42	87.50	26	61.90	16	38.10	8	16.70	
III. 10 - 15	53	44	83.00	33	75.00	11	25.00	8	15.10	
IV. 15 - 20	27	26	96.30	16	61.50	10	38.50	6	22.20	
V. 20 - 25	20	20	100.00	15	75.00	5	25.00	5	25.00	
VI. 25+	20	14	70.00	11	78.60	3	21.40	5	25.00	
6. Annual income at the present place of residence (Rs.)										
I. Below 3,000	10	5	50.00	2	40.00	3	60.00	3	30.00	
II. 3,000 - 5,000	90	74	82.20	49	66.20	25	33.80	17	18.90	
III. 5,000 - 7,000	63	60	95.20	42	70.00	18	30.00	9	14.30	
IV. 7,000 - 10,000	41	39	97.50	26	66.60	13	33.30	6	14.60	
V. 10,000 - 12,000	6	4	66.70	2	50.00	2	50.00	1	16.70	
VI. 12,000+	8	7	87.50	5	71.40	2	28.60	4	50.00	
VII. No income/income not known	4	-	-	-	-	-	-	-	-	-
TOTAL	222	189	85.10	126	66.70	63	33.30	40	18.00	

laws have sent remittances, 98 per cent brothers have done so. Sons and other relatives occupy third and fourth ranks respectively, two third and half of them have remitted.

As regards those having families/dependents with them, and single migrants, the latter are more likely to remit than the former. 89 per cent of the latter have remitted while the proportion of remitter among former is 62 per cent only.

Literates are more likely to remit than illiterates (Table 7.7). The proportion of remitting illiterates is 69 per cent only while the proportion of such literates has increased with educational scale. Due to lower income the capacity of remitting seems to be lower with illiterate. Though the rate of increase with educational levels is not linear, it does not reflect, in any way, that education has any effect in loosening the family ties. Flow of remittances depends on the needs at origin also.

By present place of residence, forces personnel (97 per cent) and out-migrants located within the districts of birth (96 per cent) have the highest proportion of remitters followed by those located in contiguous districts (86 per cent). The proportion of remitters from farther

destinations is lower (74-78 per cent). It is due to the fact that such migrants have mostly gone to big cities, and higher cost of living in these cities reduces their capacities to remit.

As regards the period of out-migration and decision to send remittances, our data suggest that the proportion of remitters increases with the increased period of stay at the destination, but it comes down in more longer period say 25 years or more. In the initial stages (with in a period of five years or so), migrants take time to become established and they start remitting when they reach a certain level of income.³⁰ If an out-migrant has to protect and maintain his interest at the place of origin, he continues to remit even in longer periods. In a very long period (25 years or so), proportion of remitters come down, which may be attributed to two reasons, either migrants severe relationship with origin and permanently settle down at the place of residence; or having become free from all primary liabilities at the origin they start saving rather than remitting so that the deposits may be carried with them at the time of retirement.

³⁰ According to Oberai and Singh "Migrants take time to become established, and some of them have to reach a certain level of income before they start sending remittances". (Oberai and Singh, op. cit, p.94).

7.4.3 Flow of Remittances

The nature of remittance flow whether they are regular or intermittent, depend on nature of links between the migrant and his family and on the needs of village households.³¹ Apart from income, the level and pattern of remittances are affected by the initial purpose of migration. In case of long term migration, they may be sent regularly but, sometimes, they are sent for specific needs only. Remittance flows are more steady and regular where the commitment to return on the part of migrants are strong, and native households are very poor.³²

In our sample, majority of remitting migrants (67 per cent) are regular (monthly) remitters. Since they are salaried workers (though not very highly paid), they make monthly provision for the needs of family members at origin from their salaries. Remittances are generally made to the head of the household at the native place. The nature of relationship between the remitter and the head of the household at origin affects the pattern of remittances,

³¹ Connell, et.al, op. cit.

³² Ibid.

which is well reflected in our study. While all the remitting fathers are likely to remit regularly none of all remitting brother-in-laws do so. More of the remitting sons are likely to remit regularly to mothers than to the fathers as head of household. Proportion of remitters among brothers is higher than sons but the proportion of sons is likely to surpass that of brothers in remitting regularly. Two third of remitting other relatives, remit only occasionally. 85 per cent of all remitting husbands remit regularly.

Only one-fourth of migrants with families/dependents living with them, remit regularly. Remitters in most of the cases are those who keep sons with them and wives at origin. On the other hand, two third of single migrants are regular remitters.

Education seems to play neutral role regarding the flow of remittances. By distances, greater proportion of regular remittances are likely from armed forces and nearby places. Proportion of regular remittances has decreased with distance. Tendency of regular remittances seem to increase with period of migration, obviously, due to increasing incomes overtime.

7.4.4 Remittances in Kind

Alongwith cash, migrants are expected to bring gifts at every visit or send through fellow migrants. In their review of literature Connell et.al. narrate instances of African, Nepalese and South-East Asian migrants bringing back urban goods. These goods include ordinary consumption articles, clothing, utensils transistor radios, gold and ornaments etc.³³ Kumaoni migrants are not exception to these practices as 18 per cent of them have sent or brought back the goods in the year under reference. These goods valued worth 3 per cent of total income of migrants in that year. The most common goods brought were wearables including shoes. Edible items like oil, gur, sweets, gram etc. and utensils also formed the part of these goods but were negligible in terms of costs and quantity. Next in importance to wearable, were watches and transistor radios.

Characteristically, most likely to bring such goods were fathers and husbands in relationship; single by family status at the place of residence; illiterate, below primary and graduate and above by educational levels; residing in neighbouring states and other states by distance; staying outside for longer periods; and those belonging to highest and lowest income groups.

³³ Ibid, pp.94-95.

7.5 Visits

Like remittances, visits to the native place manifest links. These may be regular or occasional depending upon the needs and circumstances at both the ends.

During the year under reference (1980-81) 87 per cent migrants visited their villages.³⁴ Among visitors the proportion of those who visited more than once was more than half (53 per cent). It shows the strong commitment on the parts of migrants to return to their villages for various reasons. As regards purpose of visits, Khanka bifurcates them into economic and social purposes. Economic purposes include help in family enterprises, and maintenance and transactions regarding family property while attending of ceremonies, visits to relatives and other activities formed the part of social purposes.³⁵ But to us, it seems rather impossible to single out a migrant who visits with only one specific purpose in mind. When he leaves for his native place he has a number of purposes in mind which he

³⁴ In a similar study of district Pithoragarh, Khanka found that 86 per cent of total migrants visited their villages during 1981-82 (Khanka, S.S., 1983 : Labour Force Employment and Unemployment in a Backward Economy : A Study of Kumaon Region, Unpublished Ph.D. Thesis, p.135).

³⁵ *Ibid.*

wants to achieve in one shot i.e. at minimum cost. Prior to visit, he fixes (by postal correspondence or by any other means) a certain time for his visit which is suitable to achieve multiple purposes. His priorities among purposes may be different but the purpose of visit cannot be singled out. In this context, it seems more appropriate to identify as to who visits more rather than to classify the migrants according to the purpose of visit.

Details of the visits by the characteristics of migrants are given in Table 7.8. By relationship with the head of household, the table reveals that, all husbands and fathers are likely to visit their households, regularly and frequently, at least once in a year. More than half of the husbands and half of the fathers are found to frequent more than once. About one fifth of the husbands and one-fourth of fathers have frequented for even more than five times, in our sample. The length and frequency of migrants' return are often determined by the degree of control exercised by his family.³⁶ In most of the cases, wives and sons as heads of household act as mere proxy in the control and management of household affairs and perogative regarding all the decisions and directions lie with the

³⁶ Connell, et.al, op. cit, p.123.

Table 7.8 : Visits by Social, Demographic and Economic Characteristics

Characteristics	Total out- migran- ts	Total migran- ts	Migrants having visited their birth place						No. 12	No. 13	
			Once		Twice		Thrice		Four	Five times and more	
			No.	%	No.	%	No.	%	No.	%	
0	1	2	0		1		2		3		0
1. Relationship of the head of household at origin											
i. Wife	39	39	100.00	18	46.10	9	23.10	2	5.1	3	7.7
ii. Mother	36	30	83.30	19	63.30	7	23.30	2	6.7	2	6.7
iii. Father	81	71	87.60	36	50.70	17	23.90	5	7.0	6	8.4
iv. Brother	42	33	78.60	20	60.60	7	21.20	1	3.0	1	3.0
v. Son	12	12	100.00	6	50.00	2	16.70	—	1	8.3	4
vi. Sister-in-law	5	4	80.00	3	75.00	1	25.00	—	—	—	—
vii. Others	7	4	57.00	3	75.00	—	—	1	25.0	—	—
2. Presence of Adult Male at origin											
i. Present	145	123	84.80	68	55.30	27	21.90	6	4.9	8	6.5
ii. Not present	77	70	90.90	37	52.80	16	22.90	5	7.1	5	7.1
3. Family status at the place of pre- sent residence											
i. With family/ dependents	29	15	51.70	11	73.30	4	26.70	—	—	—	—
ii. Single	193	178	92.20	94	52.80	39	21.90	11	6.2	13	7.3

Contd.../-

Table 7.8 Contd.

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	0	1	2	3	4	5	6	7	8	9	10	11	12	13
4. Place of present residence														
1. Within the district of birth	27	26	96.20	2	7.70	2	7.70	3	11.5	4	15.4	15	57.7	
11. Contiguous districts	37	29	78.40	7	24.10	8	27.60	4	13.8	4	13.8	6	20.7	
111. Other districts of the State	39	29	74.40	15	51.70	12	41.40	2	6.9	1	—	—	—	
1V. Neighbouring States	41	35	85.40	26	74.30	7	20.00	1	2.8	1	2.8	—	—	
V. Other States	14	13	92.90	9	69.20	4	30.80	1	—	1	—	—	—	
VI. Armed Forces	62	61	98.40	46	75.00	10	16.40	1	1.6	4	6.5	—	—	
VII. Not known	2	—	—	—	—	—	—	—	—	—	—	—	—	
5. Period of Out-Migration (Years)														
1. Less than 5	54	47	87.00	25	53.20	14	29.80	3	6.4	2	4.2	3	6.4	
11. 5 - 10	48	45	93.70	26	57.80	8	17.00	3	6.7	4	8.9	4	8.9	
111. 10 - 15	53	45	84.90	26	57.80	8	17.00	1	2.2	3	6.7	7	15.5	
1V. 15 - 20	27	22	81.50	14	63.60	3	13.60	1	4.5	2	9.1	2	9.1	
V. 20 - 25	20	18	90.00	7	38.90	6	33.30	3	16.7	—	—	2	11.1	
VI. 25+	20	16	80.00	7	43.70	4	25.00	—	—	2	10.0	3	18.7	
TOTAL	222	193	86.90	105	54.40	43	22.30	11	5.7	13	6.7	21	10.9	

migrant. In some circumstances, the technical conditions of agricultural production may be such that certain tasks can be performed by men and that those tasks must be performed regularly; under such circumstances, a farm household must ensure regular return or arrange for hired or exchange labour³⁷ e.g. for ploughing. About 88 per cent of the sons are likely to visit where the head of the household is father but this likelihood declines with the mother as a head of household. In cases where the parents are old and infirm, the sons role conform to that of the fathers and the husbands. In addition, affection for parents and their own families staying back, makes them homesick. Lower proportions of visits as well as remittances by sons with mothers as a head of households indicates that fathers' imposing authority is also instrumental in the maintenance of links by migrants. Visits by brother-in-laws are proportionately higher than brothers. Absence of male member at the native place makes obligatory for migrants to visit. Other relations are likely to visit less, perhaps, due to the weakening of ties with the distance of relationship.

³⁷ *Ibid.*

About half of the migrants with families/dependents at the place of present residence visit their native homes. Visits by such migrants take place either to carry the families with them or to look-after the household when the migrants keep with them only sons, and wives stay back. Barring a few new migrants, nearly all the migrants without families at the place of present residence visit. About one fourth of them visit more than once and half of them frequent more than five times.

Nearly, all the migrants from armed forces visit their native place, at least, once a year. The distance and the nature of work is said to affect the number of return trips and the length of stay.³⁸ Since the life in armed forces is full of hardships and discipline bound, its members are entitled for 60 days annual leave in a year with a cost free visit to and from their homes, which is, generally, availed by all of them. Highest proportions of visits and trips are recorded in the case of intra-district out-migrants. It seems that daily commuting has been converted into weekly and monthly commuting as the cost of living in the towns or elsewhere was too high for them to justify shifting the family.³⁹ To our surprise, proportion of visits in case

³⁸ *Ibid.* p.123.

³⁹ *Ibid.* p.122.

of inter-state out-migrants are higher than inter-district out-migrants, although number of trips in case of the former are comparatively lower. Apart from distance and nature of work, social life at the place of residence, climate and familial factors seem to exert influence on the proportion of visitors and visits. Most of the migrants with families are located in the districts (other than home district) of home state and neighbouring states (Delhi) as well as it has also been found that in many cases more than one working migrant of the same household are employed in the same city, who live together. As a result, number of visitors from these destinations are reduced as migrants with families visit less and in case of more than one migrants of same households living together, one or two of them make visit to the native place. On the other hand, distant migrants are mostly single at the place of residence and being a menial job holders their social life is extremely restricted. Hence, during the summer, they are likely to return to their cooler homes in the quest of cold water and to relieve the strain of their nerves.

Period of out-migration does not seem to have any adverse effect on the numbers and frequencies of visits as the proportions of visit belonging to migrants of all

time periods are more or less similar. The migrants of longer stay who are most likely to return are likely to frequent more than others.

7.6 Conclusions

Neither distance nor illiteracy deters the long distance migration as the proportion of farther movers among total migrants and proportion of illiterates and those with little education among farther movers is comparatively higher. Opportunities for jobs and presence of friends and relatives in the towns have played a crucial role in determining the destination of migrants. They have a tendency of going to bigger towns, particularly industrial and capital towns. Those who lack links or have lesser links with towns prefer to join armed forces.

Flow of migration is mainly rural to urban and who so-ever has gone to physically rural destination, is also engaged in urban-oriented job.

Occupational structure of migrants reflects their preference for salaried jobs. Poor economic, social and political background of migrants can ensure them only lower level jobs whether they are in armed forces or in civilian organisations. No migrant was found in a supervisory or in a higher order administrative job and only one-fourth of them were found to be white collar workers.

Due to the growing competition with the migrants from other regions and lower growth of white collar jobs, the proportion of Kumaoni out-migrants in white collar jobs has decreased and in that of minial jobs has increased in last 5 to 10 years.

Income levels of migrants at the place of residence were found to be generally low. About 45 per cent of them were earning below Rs.5,000 per annum, while another 46 per cent were earning between Rs.5,000 to 10,000 annually. Only 7 per cent were earning above Rs.10,000 annually subject to the maximum of Rs.14,000 only.

In spite of, poor earning they have been maintaining a constant link with their native place by sending remittances and making visits. Since size of remittances are directly related to the size of income, only one-fourth of their total income was converted into remittances. Very high proportion (85 per cent) of remitting migrants shows a high degree of commitment to the native place on the part of migrants. Their commitment is further confirmed by a high proportion (87 per cent) of them visiting their native place with regular frequency. During the year 1980-81, 46 per cent of the migrants frequented more than once.

CHAPTER VIII

Effects of Migration

Geographical mobility of human beings leads to movements and relocation of resources, tangible and intangible. Hence, it has significant and far reaching economic and social consequences for the areas sending and receiving migrants.

8.1 General Observations

In poor and semi-developed countries, migration is mostly age and sex selective i.e., majority of migrants are males in their late teens or early twenties. So age and sex composition of the population at the origin is highly distorted as the stayers are mostly children, women and old. Thus, the population in working age groups is generally reduced. It is also observed that migration tends to delay marriages and subsequently birth rate falls.²

Impact on production depends on many factors. It is observed that in the case of agriculture, if the contribution

¹ Doughty, P.L. (1968) : Hauylas, An Andean District in Search of Progress, Cornell University Press, Ithaca.

² Oliver, D.L. (1973) : Bougainville : A Personal History, Honolulu, East-West Centre Press, p.81.

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of marginal migrant to output is small, he is replaceable by other workers and through extended work by other family members. The impact on production may also be negligible if his return at harvest time is possible, and production technology replacing labour is available. On the other hand, it is argued that the adverse effects like peak season labour shortage, deterioration of production management, ill effect on education, child care, health and tranquillity of old age due to extended work for kin cannot be avoided.³ As a result, more labour intensive crops are replaced by less labour intensive crops; more seasonally peaked crops by less seasonally peaked crops, and also, the cultivation of such crops gets encouragement as are more easily managed by women and children. Instances of intensive cultivation becoming extensive are not rare.⁴ Due to the loss of manpower cases of rotated fallows reverting to pastures and fall in cropped acreage are also observed. The shortage of manpower due to migration is compensated by hired labour where remittances are available and some labour is still available, in spite of selective migration which reduces labour supply as a whole. The cases are also not rare where reversion to subsistence cropping has taken place in

³ Connell, et.al. (1976) : Migration from Rural Areas : The Evidence from Village Studies, Delhi, Oxford University Press, pp.142-143.

⁴ Cohen, A. (1965) : Arab Border Village in Isreal, Manchester, 1965.

initial stages but cash cropping has flourished later on when sufficient inflow of remittances has set in.⁵ It is not possible to counteract the loss of migrants in every case.⁶

Remittances change the composition of rural income which has its effects on distribution of income, technological change and division of labour. The effects are varied in different areas.

It is supposed that rural out-migration generates a sizeable surplus in industrial sector which provides the necessary physical and working capital for economic development on the one hand, lowers man-land ratio which facilitates the changes in rural production techniques, on the other. Transfer of rural population to more productive urban sector generates more demand for rural output which raise the prices of agricultural output and, eventually, agricultural production and rural incomes. Increased rural incomes raise the levels of consumption and encourage technological change, which in turn raise further rural income. On the other hand, it is also contended that the transfer of human capital in the form of educated young adult males adversely affects

⁵ Connell, et.al, op. cit, p.144.

⁶ Ibid, p.145.

the agricultural productivity and income and thus encourage more migration.⁷ Increased demand for agricultural goods and reduced supply of labour due to migration may raise agricultural wage rates. Which may, in turn, encourage introduction of labour saving technology, affecting the small farmers adversely. Available evidence suggests that output per acre, generally, tends to be greater on small farms, even though, the productivity of labour and machinery tends to be higher on larger farms.⁸

Out-migration from rural areas is supposed to promote technological change in agriculture. Labour shortage due to migration may lead to higher wages inducing technological change, of labour saving character, remittances providing the wage fund.⁹ Further, returned migrants bringing money as well as knowledge and experience of alternative production techniques may adopt new practices of cultivation.¹⁰ Several field studies question the validity

⁷ Hathaway, D.E. (1964) : Migration from Agriculture : The Historical Records and Its Meaning in C. Eicher and L. Wilt (eds.), Agriculture in Economic Development, New Delhi, McGraw Hill.

⁸ ILO (1976) : Poverty and Landlessness in Rural Asia, Part I, Geneva.

⁹ Stark, O. (1976) : Rural to Urban Migration and Some Economic Issues : A Review Utilising Findings of Surveys and Empirical Studies, Covering 1965-75 Period, Geneva, ILO (Mimeo), World Employment Programme Research Working Paper, (Restricted) as quoted by Oberai A.S. and Singh H.K. Manmohan, Causes and Consequence of Internal Migration.

¹⁰ Miracle, M.P. & Berry, S.S. (1970) : Migrant Labour and Economic Development in Oxford Economic Papers, March, Vol. 26, No. 1, pp. 86-108.

of these propositions propounding that bulk of remittances goes to rich farmers, and lack of competitive pressure prevents them from innovating.¹¹ Evidence shows that a very small part of remittances is used for rural development,¹² and major portion is spent in every day household needs or in conspicuous consumption.¹³ Contribution of returned migrants on technological change largely depends on the type of returned migrants.¹⁴ Returned migrants are more likely to be unsuccessful migrants, retired white collars, who Soldiers and others/ may possess very little productively useful skills but may be inclined to urban pattern of consumption.

Migration of young adult males changes the age composition of rural population. Hence, where remittances flow in reliance on wage labour increases. Technological change and capital investment in agriculture increases monetisation of agriculture, as a result, wage labour component in total

¹¹ Stark, O, op. cit.

¹² Johnson, G.E. and Whitelaw W.E. (1974) : Urban Rural Income Transfers in Kenya : An Estimated Remittances Function, Economic Development and Cultural Change, April, Vol. 22, No. 2.

¹³ Connell, et.al, op. cit. Chapter V.

¹⁴ Dasgupta, B. (1979) : Land Settlement and Cooperatives, No. 1, Rome, FAO, pp. 23-24.

employment increases.¹⁵ But this is confined to a few richer households only who have comparatively larger holdings, and where some of the adult males stay back. On the contrary, a number of field studies reveal that out-migration of young adult males put immense burden of agricultural work on women and of domestic work on children, old and even on infirms.¹⁶ So the adverse effects on equality of population and life is easily understandable. Remittances may facilitate the employment of wage labour, but wage labour cannot be a perfect substitute for absenting males as they are employed for specific operations only. The burden of most of the work, supervision of work and getting the work done, falls on women.

8.2 Effects of Migration in Kumaon

8.2.1 On Age and Sex Composition

Earlier, we have already noted the peculiarities of age-sex composition in Kumaon region. Our sample data (Table 8.1) confirms that out-migration of young adult

¹⁵ Oberai, A.S. (1978) : Changes in Structure of Employment with Economic Development, Geneva, ILO.

¹⁶ Connell, et.al, op. cit. pp.147-148.

Table 8.1 : Age-Sex Composition and Sex Ratio

Age groups	Migrant Households			Non-Migrant Households			Total Households					
	Total	Male	Female	Sex ratio	Total	Male	Female	Sex ratio	Total	Male	Female	Sex ratio
0 - 14	41.6	49.6	50.4	1017	40.9	53.3	46.4	865	41.2	51.6	48.4	939
15 - 39	34.5	37.6	62.4	1658	38.7	49.5	50.5	1018	36.6	43.9	56.1	1278
40 - 60	17.6	38.7	61.3	1586	16.2	52.6	47.4	903	16.9	45.3	54.7	1208
60+	6.3	53.7	46.3	862	4.1	45.7	54.3	1187	5.2	50.6	49.4	978
TOTAL	100.0	43.8	56.2	1283	100.0	51.5	48.5	940	100.0	47.6	52.4	1099

males have changed the age sex composition. The population of children (below 15 years) and old (60+ ages) accounts for 48 and 45 per cent for migrant and non-migrant households respectively. This has raised the average of dependents to 46 per cent in total population. Moreover, the proportion of males to females in working age groups has deterioriated in migrant households. There are only 38 and 39 per cent of males in age groups 15-39 and 40-59 as against 49 and 52 per cent respectively in non-migrant households. Gravity of the situation can be inferred from the fact that, in our sample head of the 50 per cent of the migrant households were females.

Sex ratio is above unity i.e. 1099 females per 1000 of males in total population. Females per thousand of males in non-migrant households are 940 but they are 1283 per thousand of males in the migrant households. Sex ratio is abnormally high in working age groups (1658 in 15-39 age group and 1586 in 40-59 age group) in migrant households. It would not be inappropriate, if the connotation of working force as 'manpower' is replaced by 'woman power' in the context of Kumaon.

8.2.2 On Participation of Women and Children

Women predominate work force in Kumaon, the proportion of women as 55 per cent in total work force indicates that

Table 8.2 : Workers (15-39) by Sex and Size Class of Holdings

Size class (acres)	Migrant Households			Non-migrant Households			Total Households		
	Male		Female	Male		Female	Male		Female
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Upto 1	53 (38.1)	86 (61.9)	139 (100.0)	131 (51.2)	125 (48.8)	256 (100.0)	184 (46.8)	211 (53.4)	395 (100.0)
1 - 2	51 (37.8)	84 (62.2)	135 (100.0)	45 (49.4)	46 (50.6)	91 (100.0)	96 (42.5)	130 (57.5)	226 (100.0)
2 - 3	32 (37.6)	53 (62.4)	85 (100.0)	39 (52.0)	36 (48.0)	75 (100.0)	71 (44.4)	89 (55.6)	160 (100.0)
3 - 5	29 (45.3)	35 (54.7)	64 (100.0)	15 (50.0)	15 (50.0)	30 (100.0)	44 (46.8)	50 (53.2)	94 (100.0)
5+	6 (26.1)	17 (73.9)	23 (100.0)	5 (45.4)	6 (54.6)	11 (100.0)	11 (32.3)	23 (67.6)	34 (100.0)
TOTAL	171 (39.3)	275 (61.7)	446 (100.0)	235 (50.8)	228 (49.2)	463 (100.0)	406 (44.7)	503 (55.3)	909 (100.0)

N.B. : Figures in parenthesis denote percentages.

women are called to replace the male workers who have migrated (Table 8.2). The extent of female participation in work force is as high as 62 per cent in migrant households, while it is only 49 per cent in non-migrant households. Absence of males has tremendously raised the burden of females by adding more agricultural work and its supervision to their traditional task of cooking; child care; grinding and husking of grains; collecting fuel and fodder, fetching water etc. They are compelled to perform very heavy works even in very extreme circumstances.¹⁷ Among the ill effects of male out-migration, over-burden of work for women was considered the most important by the respondent households, in our sample (Table 8.3). As a result, the health of women is impaired and longevity is reduced. Lower proportion of females (46 per cent) in the ages 60 and above in migrant households in comparison to females (54 per cent) in non-migrant households, indicates the earlier female mortality in the former households (Table 8.1).

Male selective out-migration of working age groups also increases burden on children and aged. Children (even 3-6 years of ages), old and infirm are forced to perform the

¹⁷ Our observation in the field shows that it is a common practice in Kumaon that woman work and carry head-load during the peak pregnancy period and days of confinement. Such instances are not rare when, sometimes, delivery takes place even at the place of work (fields or forests).

Table 8.3 : Ill Effects of Migration (As reported by Households)

Responses	No. of households	Percentages
1. Over work for female	67	47.2
2. Decrease in agricultural income	33	23.2
3. Over-work for children and old persons	28	19.7
4. Reduction in the size of operational holding	8	5.6
5. Insecurity in family	3	2.1
6. Dislocation of household activities	2	1.4
7. Decline in animal rearing activities	1	0.7
Total reporting ill effects	142	100.00
Total Migrant households	160	-

domestic works e.g. to carry water, prepare vegetables, supervise infants and keep the village swept and weeded.¹⁸ This is also borne out by the responses to our question to migrant households (Table 8.3). Children ploughing the fields; carrying loads; grazing and feeding animals; and assisting the main workers in many other ways are easily noticeable all over the region, particularly the hilly part of the region. In our sample, one-fifth of the children (6-15 age group) were found to be working in total households (Table 8.4). But the proportion in migrant households was higher (23 per cent) than non-migrant households (17 per cent). Since hired labour cannot be used for all types of operations extended work for remaining members of households including children is the only way out. The burden of work on children is higher in smaller households.

Migration has raised the rate of schooling in the region, at the same time, it has sandwiched the children of female dominated smaller households between schooling

¹⁸ Cf. Chapman, M. (1969) : A Population Study in South Guardcanal Some Results and Implications; Oceania, 40(2), pp. 119-147.

Table 8.4 : Proportion of Children (6-15 years) Working in Relation to Family Size

Household size	Migrant Households			Non-migrant households			Total households		
	Total no. of children	No. of children working	Children working as % of total children	Total no. of children	No. of children working	Children working as % of total children	Total no. of children	No. of children working	Children working as % of total children
4 and below	61	16	26.2	35	5	14.3	96	21	21.9
5 - 7	128	36	28.1	153	28	18.3	281	64	22.7
8 - 10	43	4	9.3	43	5	11.6	86	9	10.5
10+	13	1	7.7	6	3	50.0	19	4	21.0
ALL	245	57	23.3	237	41	17.3	482	98	20.3

Table 8.5 : Proportion of Children School Going and Working as well

Household size	Migrant households		Non-migrant households		Total households	
	Total no. of children	No. of children going to school	Total no. of children	No. of children going to school	Total no. of children	No. of children going to school
4 and below	61 (86.90)	53 (22.60)	35 (62.80)	22 (13.60)	96 (78.10)	75 (20.00)
5 - 7	128 (68.00)	87 (20.70)	153 (66.70)	102 (4.90)	281 (67.30)	189 (12.20)
8 - 10	43 (79.10)	34 (2.90)	43 (67.40)	29 -	86 (73.20)	63 (1.60)
10+	13 (84.60)	11 -	6 (50.00)	3 (33.3)	19 (73.70)	14 (7.10)
ALL	245 (75.50)	185 (16.80)	237 (65.80)	156 (5.80)	482 (70.70)	341 (11.70)

N. B. : Figures in parenthesis denote percentages. Percentages of school going children are based on the total no. of children while those of school going children working is based on the number of children school going.

and work (Table 8.5). 71 per cent of the children (age group 6-15) were found attending school, and 12 per cent of total school going children were found to be working also. Among the migrant household a larger proportion (75 per cent) of school age children attend schools, but the proportion of children attending school while also working was also found to be higher in their case than in the non-migrant households.

8.2.3 Availability of Workers and Use of Hired Labour

Reduction in the number of workers is an inevitable outcome of migration. After migration, workers per household and per acre of cultivated land were found to be 2.7 and 2.0 respectively in total (Table 8.6). In spite of migration, the proportion of workers per household (2.8) in migrant households was still higher as compared to non-migrant households but the proportion per acre of land (1.8) was lower. The number of male worker per acre in migrant households was nearly half of the non-migrant households.

Migrant households are found to be using hired labour to a much larger extent than the non-migrant households. 54 per cent of sample households used hired labour during 1980-81 (Table 8.7). The proportion was 70 per cent among

Table 8.6 : Workers per Acre and per Household and Output

Size classes of holdings (acres)	MIGRANT HOUSEHOLDS						Net Output (Rs.)					
	Workers		Per Acre		Per acre increase (+) or decrease (-)	% in- crease (+) or, decrease (-)						
	Per Households	Male Female	Total	Male Female	Total							
Male	Female	Total	Male	Female	Total	Per worker from all sources	Per worker from all sources					
0 - 1	1.0	1.6	2.6	2.1	3.4	5.5	1332	241	-	728		
1 - 2	1.0	1.6	2.6	0.8	1.3	2.1	863	(-)	35.2	425	76.3	1009
2 - 3	1.1	1.8	2.9	0.5	0.8	1.3	774	(-)	10.3	556	30.8	1105
3 - 5	1.4	1.7	3.2	0.4	0.5	0.9	820	(+)	5.9	866	55.7	1546
5+	1.0	2.8	3.8	0.2	0.6	0.8	791	(-)	3.5	1050	22.4	1785
ALL	1.1	1.7	2.8	0.7	1.1	1.8	860	-	488	-	1057	

Table 8.6 Contd.

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NON-MIGRANT HOUSEHOLDS

		Workers			Per Households			Per Acre			Net Output (Rs.)			
		Male	Female	Total	Male	Female	Total	Per acre	% increase	Per worker	% increase	Per worker	% increase	
0 - 1		1.4	1.3	2.7	3.4	3.2	6.6	1803	-	271	-	-	1068	
1 - 2		1.2	1.3	2.5	1.0	1.0	2.0	914	(-) 49.3	445	64.2	64.2	1372	
2 - 3		1.5	1.4	2.9	0.6	0.6	1.2	840	(-) 8.0	670	50.6	50.6	1948	
3 - 5		1.4	1.4	2.8	0.4	0.4	0.8	819	(-) 2.5	1082	61.5	61.5	2437	
5+		1.7	2.0	3.7	0.2	0.3	0.5	524	(-) 36.0	952	(-) 12.0	(-) 12.0	2029	
ALL		1.4	1.3	2.7	1.2	1.1	2.3	1004	-	439	-	-	1382	

Contd..../-

Table 8.6 contd.

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TOTAL HOUSEHOLDS																	
Workers					Net Output (Rs.)												
Per Households		Per Acre			Per acre	% Increase (+) or, decrease (-)			Per worker	% Increase (+) or, decrease (-)							
Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
0	-	1	1.2	1.4	2.6	2.9	3.3	6.2	1617	-	-	261	-	-	949	-	
1	-	2	1.1	1.5	2.6	0.9	1.2	2.1	883	(-)	45.5	433	65.9	43.3	1155	40.9	1500
2	-	3	1.3	1.6	2.9	0.6	0.7	1.3	791	(-)	10.3	610	40.9	10.3	1830	53.3	1867
3	-	5	1.4	1.6	3.0	0.4	0.5	0.9	820	(+)	3.7	935	53.3	3.7	1867	8.9	1867
5+			1.2	2.6	3.8	0.2	0.5	0.7	685	(-)	19.7	1018	8.9	19.7			
ALL			1.2	1.5	2.7	0.9	1.1	2.0	924	-	-	463	-	-	1223		

Note : (+) = Increase over preceding size class
 (-) = Decrease over preceding size class

migrant households, while it was only 39 per cent among the non-migrant households. Cost of labour worked out to Rs.48 per acre and Rs.76 per household for migrant households and Rs.38 per acre and Rs.45 per household for non-migrant households. Cost of cultivation per acre is, thus, raised by migration.

In spite of the use of hired labour and consequent higher cost of cultivations of the migrant household, output per acre could not be maintained at the level of non-migrant household. Value of per acre net output of migrant households estimated to Rs.860, and in case of non-migrant households Rs.1004 (Table 8.6). It appears that the loss occurred in per acre production of migrant households, is not only due to the fact that some male oriented operations in agriculture suffer; but also due to the lack of production skills and overall management which cannot be compensated by the use of hired labour. Though, there is comparative shortage of workers per acre in migrant households; yet it does not reflect that the loss per acre is due to the shortage of number of workers per acre. In some of the size classes of holdings (1-5 acres) in migrant households, even-where, the workers per acre exceed that of non-migrant households, net output per acre is comparatively lower (Table 8.6). It signifies that the loss in productivity per

Table 8.7 : Use of Hired Labour in Agriculture and Labour Cost Per Household and Acre

size class of holding (Acres)	Migrant Households			Non-migrant Households			total Households		
	Labour Costs(Rs)			Labour Costs(Rs)			Labour Costs(Rs)		
	No. of House- hold- using- hired labour	Per acre of house- hold culti- vated area	No. of house- hold- using- hired labour	Per acre of house- hold culti- vated area	No. of house- hold- using- hired labour	Per acre of culti- vated area	No. of house- hold- using- hired labour	Per acre of culti- vated area	No. of house- hold- using- hired labour
0 - 1	53 (33.1)	31 (58.5)	70.0	33.0 (55.3)	94 (25.5)	24.0 (25.5)	10.0 (44.5)	147 (37.4)	55 (37.4)
1 - 2	52 (32.5)	38 (73.1)	64.0	82.0 (21.2)	36 (41.7)	15 (41.7)	35.0 (26.7)	88 (60.2)	53 (60.2)
2 - 3	29 (18.1)	27 (93.1)	47.0	103.0 (15.3)	26 (57.5)	15 (57.5)	35.0 (16.7)	80.0 (76.4)	55 (76.4)
3 - 5	20 (12.5)	12 (60.0)	25.0	84.0 (6.5)	11 (81.8)	9 (81.8)	36.0 (9.4)	130.0 (67.7)	31 (67.7)
5+	6 (3.8)	4 (66.7)	47.0	242.0 (1.7)	3 (100.0)	3 (100.0)	82.0 (2.7)	550.0 (77.8)	9 (77.8)
ALL	160 (100.0)	112 (100.0)	48.0	76.0 (100.0)	170 (38.8)	66 (38.8)	38.0 (100.0)	45.0 (100.0)	178 (53.9)

N. B. : Figures in parenthesis denote percentages. Percentages of households using hired labour are based on total number of households.

acre is due to the disturbance in optimum ratio of male-female workers per acre, and loss of manpower having special skills for agriculture due to migration. In spite of higher output per acre in bottom size classes of holdings (0-2 acres), more workers per acre are not justified as the disguised unemployment in agriculture is clearly visible when we look at the output per worker. At bottom size classes of holdings, output per worker is significantly low; but it shows an increasing tendency with the lower worker/land ratios (Table 8.6).

Disguised unemployment should have induced the workers of migrant households to make an attempt to raise their income from other sources. But it does not seem to have taken place as the output per worker from all sources is also lower in the case of migrant households (Rs.1057 per worker) as compared to non-migrant households (Rs.1382 per worker). It indicates that the cream of the working force having initiative, zeal and capability has gone out. The absence of migrants has always been felt in one or another way. Only 11 per cent of migrant households have rated migration as beneficial when viewed from the angle of origin based activities. Rest 89 per cent has felt it inconvenient in many ways e.g. over work for female, children and old (67 per cent); decrease in agricultural output

(23 per cent); drop in cropped acreage and animal husbandry (6 per cent); and dislocation of household activities and family insecurity (3 per cent) (Table 8.3). Thus, it seems "everywhere high man/land ratios push out migrants, their removal can well engender seasonal labour shortages. The evidence of production management after migration does in no sense, demonstrates, 'zero marginal product of labour', because kin may be working longer (or entering the working force) to replace the migrant labour, this, have the drastic and damaging effects on education, child-care and tranquillity of old and tired workers".¹⁹

8.2.4 Migration and Household Income

We have already noted that the activities at household level slow down due to the migration of able bodied and efficient workers. As a result, output from village based resources decline; and average household and even per capita income is reduced. The average household (Rs. 2,946) and per capita (Rs. 552) income of migrant households in comparison to non-migrant households (Rs. 3,765 and Rs. 757 respectively) explains this phenomenon (Table 8.8). Remittances from migrants raise the levels of household and

¹⁹ Connell, et.al, op. cit.

Table 8.8 : Average Household and Per Capita Income of Migrant and Non-Migrant Households and Gain and Loss from Migration

Migrants Households		Non-migrant Households		Migrant Households (including Remittances)	
Holding classes (Acres)		Average household income (Rs.)		Per capita income (Rs.)	
Upto 1	33.1	1909	398	55.2	2910
1 - 2	32.5	2619	518	21.2	3669
2 - 3	18.1	3240	376	15.3	5619
3 - 5	12.5	4946	755	6.5	6647
5+	3.8	6843	955	1.8	7476
ALL	100.0	2946	552	100.0	3765
Percentage of households		Percentage of households		Percentage of households	
Average household income (Rs.)		Average household income (Rs.)		Average household income (Rs.)	
Per capita income (Rs.)		Per capita income (Rs.)		Per capita income (Rs.)	
Percentage of households		Percentage of households		Percentage of households	
Households		Households		Households	
in per capita income		in per capita income		in per capita income	
Loss or gain in per capita income (Rs.)		Loss or gain in per capita income (Rs.)		Loss or gain in per capita income (Rs.)	
Person to non-migrants		Person to non-migrants		Person to non-migrants	
households (Rs.)		households (Rs.)		households (Rs.)	
Percentage increase		Percentage increase		Percentage increase	
(Rs.)		(Rs.)		(Rs.)	

per capita income of migrant households considerably to Rs.4,816 and Rs.902 respectively. The increase in per capita income level amounts to 27 per cent in the total and 63 per cent in migrant households. The losses suffered by migrant households in comparison to non-migrant households were to the tune of 27 per cent in per capita income; but by remittances they have gained by 36 per cent after compensating the losses. Income of about one-third of the migrant households with the holding below one acre, is nearly doubled. It is raised by 80 per cent for another one-third of households with the holding between 1-2 acres. In all, 84 per cent households have an increase over 70 per cent in their income levels. 16 per cent households with the holding of 3 acres and above witnessed the increase of 34 to 36 per cent in their incomes. In this context, characterisation of regional economy as 'money order economy'²⁰ is justified to a large extent.

As regards economic costs and benefits, migrant households do not seem to have suffered due to migration. Comparison by migrant status of households proves that inclusion of remittances in local income (after compensation of the losses suffered due to migration) has raised the per capita

²⁰Cf. Khanka, S.S., op. cit., p.142.

income of migrant households by Rs.145.0 in comparison to non-migrant households (Table 8.8). The gains per capita are apparent in the households of two lowest size classes and top size class of holdings ranging between Rs.199 to 329. It appears that the households in two middle size class (2-5 acres) have suffered loss in terms of per capita income; but poor inflow of remittances does not reflect the losses due to migration. The poor inflow of remittances may be due to the fact that the households in higher size classes of holdings have lesser dependence on remittances for their current needs, so the migrants remit lesser or sometimes, simply, to maintain contacts. Secondly, migrants belonging to these households, being better educated and better paid, keep their families and other dependents with them, thus they indirectly reduce the burden on household at their native place. Besides, remittances in kind and savings of migrants which they bring at retirement are significant gains to households. Cost of migration (travelling expenses at the time of migration), though not ascertainable at origin, is often so small as to have any significant effect on calculation of costs and benefits of migration. Since the rate of schooling is raised by migration (Table 8.5) investment on human capital made prior to migration stand compensated in the form of increased facilities for the schooling of new generation. Immeasurability of social phenomenon does not permit the accounting

of other social gains and losses in concrete terms; however, economic gains are sizeable and significant.

8.2.5 Utilisation of Remittances

Our sample confirms the widely supported observation that the spending of remittances reflects the poverty and lack of investment opportunities at origin; and major portion of remittances are spent on day to day households needs or in conspicuous consumption.²¹ Of the total amount received in remittances, 78 per cent is used in consumption (including housing and household goods); 11 per cent in capital accumulation; 10 per cent in children's education; and about 1 per cent in repayment of debts (Table 8.9). Nothing was found spent on directly productive investment by the recipient households. People, mostly, migrate to supplement their current income, as 87 per cent of households have utilised 58 per cent of remittances on current consumption (food and clothes). Utilisation of remittances on edibles is highest in the households belonging to the bottom size class (below one acre) of holding; it declines with the higher sizes of holding. But the case is just opposite with the expenditure in clothing which has increased with increasing size of holding. Pattern of expenditure on these items in the households with the holding size of 5 acres and

²¹ Connell, et.al, op. cit, p.98.

Table 8.9 : Uses of Remittances

above seems to have changed; perhaps due to the costly substitute of food items and clothing, expenditure on both of the items has increased in this size class. The expenditures on ceremonies are occasional and need based and do not indicate any trend or pattern as regards to different holding classes. Marriages taking place in 9 per cent of households have taken away 8 per cent of remittances in the year under reference. Next to current consumption (food and clothes), item receiving importance from the households is housing and household durables. 55 per cent of households use 12 per cent of remittances on these items. It seems that migrant households in all size classes of holdings are almost equally concerned with enhanced social standing and power arising out of migration as the proportion of the use of remittances on repair, renovation and construction of houses and purchase of household goods is more or less similar in all the size classes. Thus, more than three-fourth of remittances are utilised in current or conspicuous consumption. Such expenses are not always treated as unproductive as they are supposed to improve the productivity of labour in economies with low levels of living;²² but our data do not support this view as we did not observe an improvement in productivity of labour as a result of the use of remittances.

²² Myrdal, G. (1968) : Asian Drama : An Enquiry into the Poverty of Nations, New York, Pantheon, Vol. III, Appendix 2.

A little that is saved after meeting the current needs is used for routine replacement of productive assets. A meagre amount of 4 per cent is used for replacing and compensating the milch and power animals; and a negligible amount (0.4 per cent) is used for repair and maintenance of agricultural lands. Children's education gets third place in households' scale of preferences as regards to utilisation of remittances as 10 per cent of them are utilised on this item by 49 per cent of households. It is said that low level of investment potential causes migration, which in turn induces remittances to be expended in children's education rather than to be invested in agriculture.²³ It stimulates further migration as educated persons try to emulate the successful migrants.²⁴

The remainder is kept as deposits which accounts about 7 per cent of remittances. The proportion of deposits is as high as one-fourth or one-fifth of remittances in the households belonging to top size classes of holdings. Where the surplus available for improving agriculture are

²³ Sardar Patel University, AERC (1971) : Umedpur (Jalore, District of Rajasthan), Economic Profile of a Mahajan Village, Indian Village Studies, 17 Vallabh, Vidyanager.

²⁴ Simon, S. R. (1966) : Changes in Income, Consumption and Investment, in an Eastern Uttar Pradesh Village, 1954-55, Cornell University, Unpublished Ph.D. Thesis.

not sufficient; and possibility of high returns to capital invested locally are bleak.²⁵ people prefer to deposit the amount at their disposal. Besides, geographical reasons provide very limited opportunities for improvement in agriculture in Kumaon. A very little portion of remittances (0.6 per cent) by a few households has been used to defray family debts. The incidence of debt seems to be higher on the households of top and bottom size classes of holdings.

Since, more than three-fourth of remittances are utilised for consumption purposes, we have tried to assess the levels of consumption and consumer debt of the households by their migrant status and results are presented in Table 8.10. The table reveals that during the last one month preceding the date of survey, per capita expenditure on food items in migrant households (Rs.49) was higher by 17 per cent than non-migrant households (Rs.42). Similarly, per capita expenditure on wearables was higher by 37 per cent during last one year; and per capita expenditure on durable goods was higher by 63 per cent during last two years in migrant households. Increased levels of consumption have raised per capita indebtedness of migrant households (it is higher by 20 per cent during last one year).

²⁵ Connell, et.al, op. cit, p.209.

Table 8.10 : Per Capita Expenditure on Various Items and Per Capita Indebtedness

Size class of holdings (Acres)	Per Capita Expenditure on						Per Capita indebtedness during last one years	
	Edibles during last one month		Wearables during last one year		Durable goods during last two years			
	MHs	NMHs	MHs	NMHs	MHs	NMHs	MHs	NMHs
Upto 1	47	43	99	88	217	184	104	76
1 - 2	49	42	131	74	475	284	151	61
2 - 3	52	47	160	104	526	382	199	228
3 - 5	48	44	123	116	609	469	8	58
5+	48	45	171	109	316	366	46	217
ALL	49	42	123	90	421	258	119	99

N.B. : MHs = Migrant households

NMHs = Non-migrant households

Expectations of remittances raise the credit worthiness of migrant households. Thus, it is evident that while the standard of living of households are raised, inequalities among them have also increased in the region.

Overall, increased expenditure on consumption and raised standard of living has increased the demand for the goods produced in urban areas and outside the region. As a result, most of the income is drained to these places instead of being invested locally. Lack of investment does not promise for any current or future employment opportunities in the region except to encourage further migration. Thus, remittances do not form any basis for the long term economic development of the region.

8.2.6 Effect on Output and Employment

In preceding analysis, we have found that output per worker has declined due to migration, simultaneously, we also have found that the decline was not due to the shortage of total workers per acre but due to the mal-adjustment in the proportion of different sexes in labour force, and more

workers per acre than required (Table 8.6).²⁶ At the same time, gains from migration are much more than losses (Table 8.8) indicating that productivity of labour was better at the place of migration rather than at the native place. In this situation, it becomes imperative to examine the optimum number of workers per acre in relation to output, and thereby to assess the position of employment in the region.

We have attempted to analyse this question in a limited way by considering only those households who pursue agriculture as their main occupation; households with the holding below 0.3 acre who derive the major portion of their income from other sources are excluded. We have examined net output per worker and per acre in relation to land-worker ratio (land per worker). Results are presented in Table 8.11. The table reveals that output per acre has, in general, a declining tendency with the increase in land/worker ratio i.e. output per acre is relatively higher when there are

²⁶ Table 8.6 provide instances that non-migrant households having almost the same proportion of workers per acre in the same size classes of holdings as their counterparts in migrant households get more output per worker and per acre with the speciality that the proportions of male and female workers per acre in non-migrant households are equal while females have larger proportion per acre in migrant households. Output per acre and worker seem to be optimum when there are 0.9 workers per acre.

more workers per acre. At the same time, output per worker has a just opposite tendency i.e. it increases with increasing land-worker ratio. Output per acre is highest when output per worker is lowest and vice-versa. Higher output per acre at lower land-worker ratio indicates a lower output per worker which implies that workers are disguisedly unemployed. Similarly, higher output per worker at high land-worker ratio indicates the shortage of workers unable to exploit even the average potentiality of the soil. In a given State of production factors and technology, an ideal or an optimum land/worker combination would be one at which both output per worker and per acre have either the tendency to equate each other; or if both are high, the point from which either of them shows a decline; or the point at which both of them are maximum. In our case, the land-worker ratio in the range of 1.34-1.66 acre (mid point 1.5 acre) per worker seems to be an ideal combination with the value of net output Rs.948 per acre and Rs.1332 per worker. More land per worker seems to be difficult to manage as shown by a sharp decline in output per acre at higher land/worker ratios. Thus, the optimum number of workers to maximise output per acre and per worker from an acre of cultivated area comes to be 0.71.²⁷ This implies that land-worker ratio

²⁷ In a study of same region Khanka has also found that 0.71 workers per acre are optimum to get optimum output per acre (Khanka, S.S., op. cit, p.143).

Table 8.11 : Land/Worker Ratio and Output

Land per worker (acre)	Area under cultivation (Acre)	No. of workers engaged	Workers per acre of cultivated area	Value of Output (Rs.)			
				Per acre	% increased (+) or, decreased (-)	Per worker	% increase (+) or, decreased (-)
Upto 0.33	50.40	211	4.18	1188	-	284	-
0.34 - 0.66	123.83	252	2.03	863	(-) 27.3	424	49.3
0.67 - 1.00	107.30	125	1.16	824	(-) 4.5	708	67.0
1.01 - 1.33	50.50	40	0.79	907	(+) 10.1	1145	61.7
1.34 - 1.66	28.10	20	0.71	948	(+) 4.5	1332	16.3
1.66+	77.76	34	0.44	648	(-) 31.6	1484	11.4
TOTAL	437.89	682	1.56	863	-	554	-

N.B. : Households with land holding 0.30 acres and below are excluded from this analysis as they practise occupations other than agriculture as their main occupation.

lower than this entails disguised employment for the workers; and higher than this denotes shortage of workers per acre. In both the cases output is below optimum. This reveals that 311 workers out of total 682 are sufficient to obtain the optimum output from 438 acres of land with households in our sample; and the rest, more than half, are disguisedly unemployed. If these workers are removed from the agriculture or if they migrate elsewhere, agricultural output is not likely to be affected. This proves that migration has helped to ease the position of employment in the region; and even further migration is not likely to affect per worker and per acre output adversely.

8.3 Conclusions

In earlier chapters, we have already noted the peculiarities in age sex composition, sex ratio and participation of women in working force in the region. Our sample data, simply, confirms that these peculiarities are mainly an outcome of male selective out-migration from the region. As a result of out-migration, sex ratio in migrant households is found to be 1283 females per 1000 males which has raised the sex ratio for total households as 1099 females per 1000 of males. Sex ratio in age groups 15-39 and 40-59 years is

found to be 1278 and 1208 females per 1000 of males in total households, which is as high as 1658 and 1586 females respectively in migrant households.²⁸ Male participation rate was as low as 38 per cent while female participation was as high as 62 per cent in migrant households while these rates were 51 and 49 respectively in non-migrant households.

Male selective out-migration has resulted in over-work for female, children and aged; reduction in the size of cropped area; dislocation of household activities and family insecurity etc. Though the rate of schooling of the children is raised but the children of small sized migrant households are sandwiched between work and schooling. In spite of extended work for female and children, hired labour is engaged for some male selective agricultural operations.

Since hired labour is not the perfect substitute for absenting male and raises the cost of cultivation, productivity per acre of cultivated area has come down. Absence of migrants has been felt in one or another form. In this sense, marginal productivity of labour cannot be treated as zero.

²⁸ Cf. Census figures indicate that in Almora females per thousand of males were 1088 and 1081 in 1971 and 1981 respectively. The corresponding figures for Pithoragarh have been recorded as 1026 and 1014. In 1971, females per 1000 of males in age groups 15-39 and 14-59 in Almora, were accounted as 1288 and 1015 respectively, while in Pithoragarh the ratio of females in respective age groups was slightly lower than Almora i.e. 1195 and 993.

Production losses due to migration are marginal, but gains in the form of remittances are substantial and sizeable. In migrant households, income levels are raised by 63 per cent, for all households in the region as a whole the income rises by 27 per cent due to remittances. In relation to costs economic benefits are many times higher.

Increased income does not promise any increase in productivity and long term development in the region as more than three-fourth of the remittances are used for consumption purposes. One-tenth of remittances used for children's education prepare the future lands of migrants. Productive investment does not find any place in the preference scale of remittance receivers. Thus, most of the income is drained to urban centres and outside the region in exchange for consumption goods.

Worker/land ratio has been found more than double of the optimum requirement, which indicates more than 50 per cent of the workers engaged in agriculture are disguisedly unemployed. Hence, out-migration has been found beneficial in relieving the pressure of population on agriculture.

CHAPTER IX

Summary and Conclusions

The present chapter summarises the findings of our analysis on out-migration from Kumaon region. Attempt is also made to derive certain general conclusions regarding the analysis of the processes and factors in out-migration. A few broad implications for strategy and policy on the issues of interrelatedness of the backwardness and out-migration are also drawn at the end. It may be mentioned that the study, though dealing with the general problem of migration has its focus on out-migration from a region with certain special characteristics, and to that extent, it is distinct from the common study on migration. Therefore, we also summarise below the main geographical and economic characteristics of the region, which make our conclusions on the process of migration summarised later, meaningful.

9.1 Area and Population

Kumaon is a border division of the State of Uttar Pradesh. Situated in its northern part, it consists of the districts of Almora, Pithoragarh and Nainital. About 29 per cent area of the region lies in plain of Uttar Pradesh known as Tarai and Bhabar, while the major portion (71 per cent) is mountainous

lying in Himalayan system. Though for administrative and planning purposes, the whole of Kumaon is treated as one entity, there are marked variations in characteristics of area, population and economic activities between its hilly and the plains parts. These differences get diffused and no definite and useful results, therefore, emerge from studies that pool together the two parts of the region. Hence, our main focus, in this study, is on mountainous part of the region.

9.1.1 The topography of mountainous part of the region is ecologically fragile and highly undulating marked by mass of tangled peaks and valleys. The altitude varies from 300 mtrs. at the foothills to 7800 mtrs. at the summit of Nanda Devi. The climate is also as varied as altitude from the sultry and suffocating heat at Bhabars and valleys to Arctic cold of snow capped peaks. Average annual rainfall varies from 72 cms. to 371 cms. according to the features of mountains. Most of the soils of the region excluding plain portion are classed as unsuitable for crop production.

As against the desired norm of 66 per cent for the hilly areas, only 55 per cent of the geographical area of the region is under forests. But the area under actual tree cover is estimated to be 38 to 41 per cent only. Due to the

large scale denudation by human and livestock population, 40-50 per cent of the forests are reported to be of poor density insufficient for the requirement of soil and water conservation. Large scale denudation of earth in the region is believed to be posing a serious ecological threat to whole of northern India. The region is also reported to be endowed with the deposits of certain mineral resources but the attempt to exploit them may further aggravate the ecological destabilisation.

9.1.2 During last eight decades (1901-81), population in Kumaon has grown at faster rate (205 per cent) than in U.P. (128 per cent) and India (187 per cent). In the districts, it has grown by 117 per cent in Almora, 300 per cent in Pithoragarh and 265 per cent in Nainital. Both natural growth of population and heavy in-migration in Nainital plain have been responsible for this phenomenon. In spite of out-migration from the region, population growth is likely to remain unabated due to the rising trend in the rate of natural growth of population in district Nainital and recently increasing trend of in-migration in the districts of Almora and Pithoragarh also.

9.1.3 Physical density of population in Kumaon is found relatively low; it was 113 as against 377 in U.P. and 216 in

India, in 1981. But density of population based on agricultural land in 1980-81 in the region (573) is similar as in U.P. (580); but it exceeds that of U.P. in two purely hilly districts of Almora (625) and Pithoragarh (604). Excluding the ecologically prohibitive area (above 30 per cent slope), the density of population in the region is likely to far exceed that of U.P. Thus, the region may be rated as economically and ecologically over populated area of the State.

9.1.4 Since, there is no large urban settlement in the region, proportion of urban population (16 per cent) is lower than in U.P. (18 per cent) and India (23 per cent); and it is very much lower (6 per cent) in two purely hilly districts of the region. The region has a higher rate (38 per cent) of literacy as compared to U.P. (26 per cent) and India (36 per cent); while its positive effect on the socio-economic conditions of the region is rather uncertain, it certainly has acted as a factor in accelerating the rate of out-migration from the region.

9.1.5 A distinct feature of the region's population characteristics is a higher sex ratio. It is not only higher than in U.P. and India, but, also in the favour of females in its hilly parts where 1081 females per 1000 of males are enumerated. Female participation in working force in the region is

much higher (27 per cent) than State (10 per cent) and national (21 per cent) averages. In the hilly districts of Almora and Pithoragarh, female participation in working force is as high as 36 and 45 per cent respectively.

9.1.6 Sectoral composition of working force in the region reflects its comparative backwardness in the State and country as whole. About 83-85 per cent of working force in Almora and Pithoragarh is engaged in primary sector as against 78 and 72 per cent in U.P. and India respectively. With virtually non-existent secondary sector, sub-sector 'other services' of tertiary sector is another major source of employment in the region. Since economy of the region is predominantly agricultural, overt-unemployment (0.88 per cent) is much less significant than in the State (1.33 per cent), but under-employment is estimated to be significant; the male workers on an average are found unemployed for 173 days and female workers for 91 days in a year.

9.2 Economic Activities

9.2.1 Occupational structure of population in the region indicates that agriculture is the mainstay of population. But, agriculture in the region, is in a highly primitive and backward state as both its qualitative and quantitative

development are constrained by topographical reasons. Major part of the geographical area of the region (55 per cent) is under forests, hence, the proportion of net sown area to total reported area is only 19 per cent as against 58 per cent in the State, which is further lower in Almora and Pithoragarh as 16 and 11 per cent respectively. Comparative backwardness of agriculture in hilly Kumaon is evident from the facts that in comparison to State averages, average size of holding in this area is just half; proportion of net area irrigated to net area sown is less than one-fifth; and use of chemical fertilisers per hectare is only one-sixteenth. During 1970-77, decrease in average size of holding has taken place by 29 per cent in the region as against 9 per cent in the State. Moreover, quality of soil is not conducive to improved agriculture as in the plains.

9.2.2 Animal husbandry, the another major economic activity of the region, also presents a gloomy picture. Livestock population, which equals the human population of the region, generally, suffers from under nutrition. Hence, milk yield of cows and buffaloes is lower than their counterparts in the plains. Bullocks, with only 15 average ploughing days in a year, are also uneconomical to maintain. Over-population of livestock has increased tremendous grazing pressure causing ecological imbalance of the region.

9.2.3 The position of non-agricultural enterprises is still more dismal in Kumaon hills. As per economic Census 1980, 3 per cent of total enterprises in the State were located in Kumaon, of which just half were found in Nainital district. Thus, districts of Almora and Pithoragarh shared less than one per cent each of State's total enterprises. Besides, topographical hazards restricting the efficacy of infrastructural facilities, lack of necessary capital and skills with local inhabitants puts severe constraints on the development of industries in the region. Most of the income generated locally or received from outside is drained out in exchange for consumption goods. Hence, a strong tendency to migrate outside the region is found.

9.2.4 The low income base and weak economic structure of the region does not seem to get realistically reflected in the official figures as the method of calculation of income suffers from certain deficiencies leading to over-estimation of output and income. The entire income originating in the forestry sector is accounted in the credit of region, though only wage component of it (14 per cent), in fact, accrues to the region. Besides, the methodology adopted for income estimation in agriculture and animal husbandry is also biased upwards. In view of diverse and lower productivity of economic activities arising out of the diverse topography of

the region, the sample used for estimation of crops; use of post-harvest whole sale prices of foodgrains for the calculation of income from agriculture; and application of regional average prices of milk products to calculate the income of animal husbandry sector, are likely to inflate the income from agriculture and animal husbandry.

Thus, the analysis made so far clearly demonstrates that the regional economy is typically backward one with characteristics that tend to encourage out-migration.

9.3 Extent and Nature of Migration

9.3.1 In the past, Kumaon has been a geographically and politically isolated part of northern India. Movements to and from the region were highly restricted by natural barriers. Even then, the bands of individuals from the plains of India entered Kumaon during the regime of Hindu kings. Immigrants were, mostly, the religious preachers, seekers of royal patronage and those seeking redemption from oppressive Muslim rule in Indo-Gangetic plains. General movements of population were purely seasonal and intra-regional in character. These movers were semi-nomad Bhotias of northern border of Kumaon who used to barter their Tibetan merchandise all over Kumaon, and, the inhabitants of hilly Kumaon making exodus to Bhabars during winters for safety from the cold and for

making some productive use of lean period in economic activities at home. The British broke the isolation of region by the construction of rails and roads, and also by such socio-economic measures like abolition of slavery, universalisation of education and by providing equal opportunity to all for getting recruitment in armed forces and other Government jobs outside the region. In recent time, out-migration from the region has reached to very high proportions.

9.3.2 Kumaon is characterised not only by high degree of out-migration from the region but also by a high degree of in-migration into its constituent district of Nainital. In the absence of any precise data on out-migration, it is very difficult to arrive at any precise estimates of migration into and out of the region. The figures of all time inter-district migration (available for 1961 and 1971), establish Kumaon as a region with net in-migration. Mass scale rehabilitation of displaced persons from Pakistan in the Tarai, swelled the in-migrant population of Nainital district, and consequently of the region also. In 1971, total in-migrants in the region are recorded as 18 per cent. Persons enumerated as migrants from the districts of the region, in other districts of the State made up 9 per cent of the population of the region. The estimates of the rest of the out-migrants who have gone beyond the limits of Uttar Pradesh, could not directly be

made. Instead, we have examined certain demographic indicators which provide indirect inference regarding position of out-migration from the region.

Population characteristics such as age sex composition, sex ratio and age cohorts, suggest that net out-migration is a distinct feature of Almora and Pithoragarh districts. The figures of all time inter-district out-migration indicate that these two purely hilly districts are constant net losers of their population. Net all time out-migration to other districts of U.P. from Almora was 13.5 and 9.5 per cent in 1961 and 1971 respectively; and from Pithoragarh 2.3 and 7 per cent respectively, while in-migration from outside the State was 1.2 and 1.8 per cent in Almora, and 3.1 and 2.3 per cent in Pithoragarh during the respective years. Thus, total in-migrants are exceeded by total inter-district out-migrants only. Higher proportion of females than State average in age group 15-39, and a higher sex ratio than that of the State, and above unity in favour of females in age group 15-39, indicate that the region loses population by migration. Age cohort analysis of 1961-71 decade shows that the region has faced a net loss of its population by 8 per cent during the decade. However, our study mainly focusses on the typically backward areas of the region from where magnitude of net out-migration is highest in the State. According to a study of migration from U.P. hills, out-migration

from Pithoragarh district was around 23 per cent; and our study in Almora estimates the rate of migration at 16 per cent. Both the studies indicate that 53-54 per cent out-migrants (including forces personnel) go beyond the limits of the State. The combined proportion of migrants going beyond the State from these districts is estimated to be 10 per cent of the population.

9.3.3 It is observed that the rate of out-migration increases with the increase in the pressure of population. Census figures show that proportion of all time inter-district out-migrants from Almora and Pithoragarh rose to 12 per cent of the population in 1971 from 9 per cent in 1901. The rate of increase of these migrants is noted to be faster (203 per cent) than the growth of population (128 per cent) in these districts during 1901-71, even without accounting for a larger proportion of out-migrants going beyond the State. The distribution of sample migrants by period of stay-out also suggests that larger proportion of population is migrating in recent decades than earlier. Among total out-migrants, the proportion of those having migrated during the last 10 years was 44 per cent, between 10 and 20 years back 39 per cent and more than 20 years back 16 per cent.

9.3.4 Migration was found to be temporary or semi-permanent in nature in earlier periods, but in the more recent periods

it has a tendency of becoming permanent. Earlier migrants were mostly single and more likely to return to their native place but an increasing tendency of wives and children accompanying the working migrant in recent years makes their return more unlikely. In our sample, the proportion of migrants who have their wives with them is found to be 10 per cent of the total migrants. Of the total wives 11 per cent accompanied the husbands with stay out for 20 years or more, 15 per cent with stay out of 15 to 20 years and major proportion i.e. 74 per cent with stay out below 15 years only.

9.4 Spatial Pattern of Migration

9.4.1 It is generally observed that proportion of migrants declines with distance. Census figures support this proposition. In 1961, the proportion of out-migrants enumerated in contiguous districts and other districts in U.P. were 70 and 30 per cent respectively and in Kumaon 77 and 23 per cent respectively. The corresponding figures from Almora and Pithoragarh stood at 81 and 19 per cent and 52 and 48 per cent respectively. But, we noted that proportion of out-migrants going to farther places has increased overtime. The proportion of out-migrants going to other than contiguous districts from Almora has increased to 19 per cent in 1961 from 7 per cent in 1911 and in Pithoragarh which was a

constituent part of Almora in 1911, it has risen to 48 per cent. The proposition that migrants prefer to go to nearby places, may be true in the beginning when the process of migration starts from an area and in case of migration inclusive of marriage migration. But when out-migration is a continuous feature for a long time and most of it is for economic reasons, destination is not necessarily a proximate place. In our sample, proportion of out-migrants with distant destination, is in fact, higher than those migrating to nearby places. Of the total out-migrants 12 per cent have moved within the district, 17 per cent to neighbouring districts, 18 per cent to other districts of the State, 25 per cent to other States of the country and 28 per cent to armed forces, for whom the location could be anywhere in the country. In the present case, relative lack of opportunities in the neighbouring districts and also within the State is an important factor disturbing the usual pattern of destinations of migrants by distance. It seems that no definite relationship of migration with distance could in fact be valid, without reference to economic opportunities. The proposition postulating concentration of migrants in more proximate locations assumes an even distribution of opportunities across the space. This assumption is mostly not valid.

9.4.2 ✓ Since distance has not been a deterrent in out-migration in the present case, the common observation that

education reduces the deterrent effect of distance in migration is not of much consequence here. Our sample reveals that 44 per cent of illiterates and 58 per cent of less educated (below primary level) have either crossed the State boundaries or have joined armed forces. On the contrary, 42 per cent and 64 per cent of out-migrants with secondary and graduation and above levels of education respectively have not crossed the boundaries of their native State. In fact, out-migrants with higher levels of education have certain jobs and certain kind of social environment of their liking in mind, which they get within the State and have no need to go far.

9.4.3 Rural to rural migration is found to be prominent in most of migration literature and in the findings of empirical studies, but migration from Kumaon is found to be purely rural to urban. 90 per cent of migrants were located in urban areas and those currently in the rural areas were also not really in rural based jobs. Forces personnel stationed in rural areas, school teachers and government employees in the offices situated in rural areas can hardly be treated as migrants to rural areas.

9.5 Who Migrates?

9.5.1 Besides the personal attributes, the characteristics of the place of origin are seen to affect the individuals'

motivation and decision to migrate. While the economic condition of the village is expected to be negatively associated with the rate of out-migration, the location of the village in respect of its distance from transport facilities and urban settlements is also found to be associated with out-migration. We found that rate of out-migration to be the highest from the villages near the road and town (21 per cent) followed by from those moderately remote from road and town (15 per cent) and lowest from the far remote from road and town (12 per cent). Nearness to road and town implies more awareness, better contacts and easy access to the towns facilitating higher degree of out-migration.

9.5.2 Since most migration is for economic reasons, mostly such members of the households migrate who are more likely to be able to get employment at destination. Therefore, males belonging to the Prime working age predominate among out-migrants. In our sample 89 per cent of the migrants were males. Average age at migration is found to be 20 years and 91 per cent of the migrants belonged to age group 15-35.

✓Chief motive behind migration being betterment of economic condition at home, migrants prefer to remain single at the place of residence so that savings can be remitted to the native place. Therefore only 13 per cent of the working migrants had their wives and children living with them.

Households of larger sizes have higher rate of out-migration. These households have more spare hands and also larger requirements of income; than can be earned locally. Most of the out-migrant households happen to be the holders of the larger holdings also. Therefore, contrary to common observation, members of households with larger size holdings have a higher tendency to migrate. This does not, however, mean that economic motivation is not important. Since the distribution of holding size is not very uneven in the sample villages, per capita holding of larger size holders due to larger family size is in no way higher than the smaller holders. So with the advantage of more numbers in the family size, these household eject more migrants, who otherwise would have remained disguisedly unemployed.

The scope for augmenting income is highly limited, for most households, but it is particularly so in the case of cultivating households due to small size of holdings and inaccessibility to and non-feasibility of application of improved technology. Therefore, cultivating households have the highest propensity to migrate. As agriculture provides very little scope for wage labour; and non-agricultural activities are virtually non-existent in the villages, households depending on wage employment for their livelihood also have a high proportion of migrants among their members.

Artisan households and those engaged in trade show the lowest migration propensity. Overall, the propensity to migrate is found to be negatively related with income levels of the households.

Education is generally found to play a key role as a chief propellant in stimulating migration. Literates constitute a very high proportion (88 per cent) among out-migrants from Kumaon. Part of the reason for a high proportion of literates among migrants lies in the high level of general literacy (52 per cent) in the sample villages. Yet the fact remain that educated have a higher propensity to migrate than uneducated, and it is found to increase with the levels of education. The educated, no doubt, find the locally available work unsuitable, and somewhat easier to move out, but in the present case, the economic reasons pushing them out are found as important as the pull of the chances of fulfilling higher aspirations on migration.

9.6 Causes and Process of Migration

9.6.1 The proposition that the 'push' factors have dominated the migration from the region as suggested by the analysis of the economic condition of the region and of the households is also suggested by the pattern of responses of households with migrants. Over four-fifths (82 per cent) of the migrants are found to have moved definitely for economic

purposes. Rest moving for other purposes were 4 per cent students, 10 per cent wives and 4 per cent children.

9.6.2 An overwhelming majority of those migrating for economic reasons suffered from the lack of income and employment opportunities. Over four-fifths of such migrants moved because of inadequate income (61 per cent), lack of local employment avenues in general (14 per cent) and non-availability of full time work (6 per cent). Only 18 per cent were reported to have moved due to the non-availability of work according to qualifications.

9.6.3 No doubt, not many of the migrants were completely without work before migration. Majority of them (51 per cent) were reported to be engaged in one or another occupations. But most of them worked in agriculture as cultivators (88 per cent) or labours (9 per cent) and were obviously employed on a work sharing basis or were unemployed for most part of the year, as the available evidence reported earlier suggests.

9.6.4 Great majority of migrants was that of own account migrants who proceeded all alone and did not obtain support from any quarter in obtaining the job. They were accounted as 80 per cent of total migrants including those securing

civilian job on direct application (24 per cent), recruited in armed forces by fixed and seasonally mobile recruiting offices (27 per cent) and set out in random fashion in the hope of finding a job (29 per cent). Rest accompanied the visiting family members and others.

9.6.5 Unlike migrants from other areas as reported in various studies, migrants from Kumaon look less desperate as over two-third migrants are found to have moved after having a job fixed or assured for them. Rest 31 per cent belonged to the category who plunged into the alien area without any express support and assurance just in the hope of getting a job after migration. But the position is, really, not so easy as it looks, except in case of 51 per cent who got direct employment in 'civilian and forces' jobs. Those assured the job on migration also had to wait as assurances did not get converted into reality easily and quickly. Of course, the degree of desperation is reduced by financial and emotional support provided by settled migrants.

9.7 Occupational Pattern and Links

9.7.1 Employment status and occupational pattern of out-migrants from Kumaon is quite different from that of other migrants. In some other migration studies, majority of

out-migrants are found to be self-employed, but among the out-migrants from Kumaon proportion of self-employed is negligible (3 per cent) and overwhelming majority is that of wage/salary earners. Since self-employment requires capital and skills, Kumaonis, lacking both of them, do not enter this field.

9.7.2 Migrants from Kumaon have a strong preference for government jobs. But most often their skills, education and training do not enable them to have jobs in the higher echelons of government hierarchy. So, they mostly get menial and lower level jobs. The highest proportion of migrants (30 per cent) have joined the armed forces followed by fourth class (25 per cent) and administrative/clerical jobs (14 per cent). Five per cent each are found in teaching, extension work and technical occupations. Almost all of these jobs fall in government sector. Rest (20 per cent) who failed to obtain these jobs accepted menial private jobs as personal/domestic servants, hotel boys, manufacturing and sales workers etc.

9.7.3 During 1980-81, annual earning of 45 per cent of migrants was less than Rs.5,000. Another 46 per cent were earning between Rs.5,000 to Rs.10,000 per annum. Only 7 per cent earned more than Rs.10,000 but did not touch the mark

of Rs.15,000. In spite of poor earnings at the place of residence, out-migrants send sizeable remittances back home. It shows a strong commitment to their native place. One-fourth of total earnings of migrants is remitted and the proportion of remitters (85 per cent) is very high. Characteristically, prominent among remitters are fathers and husbands by relationship, single migrants, better educated, those serving in armed forces and residing in nearby places from origin, and with comparatively longer stay outside the native place. About two-third of migrants were regular remitters and about 18 per cent took goods and commodities at the times of visits.

9.7.4 Migrant's strong links to native place are more conspicuously evident in their frequent and regular visits, than even in the remittances they send. During 1980-81, about 87 per cent of migrants visited their native place and 46 per cent of them have frequented more than once in a year.

9.8 Effects of Migration

9.8.1 In the analysis of Census figures regarding age-sex composition, sex ratio and women's participation in working force, we have noted certain peculiarities in the population structure of Kumaon region. Our sample data confirms that

these features are an outcome of male selective out-migration from the region. Usually, the migration is age-selective also, as those in the working age group tend to migrate more often. But this factor does not seem to have very significantly affected the working, non-working age group distribution of migrant households. In migrant households, persons in the working age groups constitute 52 per cent as against 55 per cent in non-migrant households. But male selectivity of migration is highly conspicuous in so far as we find 940 females per thousand of males in non-migrant and 1283 females per thousand of males in migrant households. Further, women have a much higher (62 per cent) work participation rate in the latter than in the former households (49 per cent).

9.8.2 Absence of males has resulted in overwork for female, children and aged. Of the total children (6-15 years) about one-fourth were found working in migrant households as against 17 per cent in non-migrant households. Though the rate of schooling has increased in migrant households, the school going children are sandwiched between schooling and working. In addition, as borne out by responses to our questions decrease in cropped area, family insecurity and dislocation of household activities are observed in the migrant households.

9.8.3 Out-migration directly influences the supply of labour. Workers per acre of cultivated area were 1.8 in-migrant households as against 2.3 in non-migrant households. As a result, migrant households are found to be using hired labour to a much larger extent than the non-migrant households. About 70 per cent migrant households were using hired labour as against 39 per cent of non-migrant households in addition to extended work for female and children.

In spite of the use of hired labour and consequent higher cost of cultivation by the migrant households, output per acre could not be maintained at the level of non-migrant households. Net value of output per acre estimated to Rs. 860 in the case of migrant households, and Rs. 1004 in case of non-migrant households. It indicates that hired labour have not proved to be a perfect substitute of family labour.

9.8.4 Decline of output from village based resources results in reduction in average household and per capita income of migrant households. Their income levels are found to be lower by 27 per cent in per capita terms in comparison to non-migrant households. Remittances have not only made good this difference but placed the figure for migrant households at a higher level than of the non-migrant households by 36 per cent. Remittances constitute 27 per cent of the incomes

of all households together. The characterisation of regional economy as 'money order economy' thus does not seem unjustified. In spite of marginal production losses, economic gains from migration are thus substantial.

9.8.5 The pattern of utilisation of remittances reflects the poverty and lack of investment opportunities in the region. Of the total remittances, 78 per cent is used in consumption, 11 per cent in capital accumulation, 10 per cent in childrens' education and 1 per cent in repayment of debts. The level of per capita consumption expenditure in migrant households is found to be raised by 17 per cent on edibles, 37 per cent on wearables, and 63 per cent on durable goods, in comparison to non-migrant households. As a result, per capita indebtedness was also higher by 20 per cent in migrant households. Remittances increase consumption expenditure which, on the one hand, is necessary for a reasonable level of living, but on the other, it also encourages the inequality among villagers and also drains out the resources to urban areas and outside the region. Children's education simply prepare the future bands of migrants; and capital accumulation is mostly in the form of financial assets which does not lead to any productive investment. Thus, remittances do not form any basis for long term economic development and employment opportunities in the region.

9.8.6 Analysis of output and employment suggests that optimum number of workers per acre of cultivated area to obtain a high level of output per acre as well as per worker is 0.71. There are 1.56 workers per acre of cultivated area in our sample signifying that 0.85 workers per acre were disguisedly unemployed. This proves that migration has helped to ease the position of employment in the region; and even larger migration is not likely to affect per worker and per acre output adversely.

9.9 Concluding Observations

9.9.1 The results of our study in general, and in the context of Kumaon region in particular, suggest that out-migration from economically over populated and ecologically fragile areas is beneficial. In the regional context, increasing pressure of human and livestock population is a grave threat to ecological balance which may prove detrimental to the whole of northern India. In order to maintain the ecological balance, the pressure of population in the region, particularly in its hilly parts, needs to be kept to the minimum for which out-migration of population is the only safety-valve.

9.9.2 Migration provides significant economic benefits to the area of origin. Remittances from out-migrants raise

the income levels in these areas which if invested in local activities may boost the levels of output. Though remittances from migrants do not lead to any directly productive investment in Kumaon due to limitations on investment opportunities, they have certainly provided respite to poverty stricken people by raising their consumption levels and helping in capital accumulation. Thus, the welfare of households at micro-level is definitely improved.

9.9.3 Remittances also facilitate the spread of education in the areas of origin. Though, education mainly prepares future migrants, it definitely benefits those who want to get out of the clutches of underdeveloped and stagnant economy. So far as, migrants earn better at the place of employment rather than that the native place, it leads to more efficient allocation of labour across regions.

9.9.4 The results of this study suggest that out-migration of able bodied members of the households causes marginal economic losses while gains from remittances are substantial. The losses occur primarily due to qualitative difference in the nature of labour-own or hired, not because of a quantitative excess of requirements over supply of labour. There are, in fact, workers (more than 50 per cent) who are under/disguisedly unemployed in agriculture whose removal from the area is not going to affect output adversely in the given

technological and organisational situations in agriculture. Since the development, of agriculture in the region is severely limited due to topographical factors and of industries due to inadequacy of infrastructural facilities, the possibility of the productive use of the surplus labour are limited. And efforts in the direction of accelerated exploitation of existing resources for the development of the area are further severely constrained by ecological considerations. The best course to save the ecology and economies of these areas seem to deport the surplus labour to some more gainful employment outside. Thus migration, in stead of being deplored and discouraged needs to be encouraged and planned.

9.9.5 Human resources and forest resources are only two major resources of hill region. Exploitation of forest resources does not benefit the local population as more than four-fifth of the income of forestry accrues outside the region of its origin. In any case, the ecological considerations warrant only restrictive exploitation of forest resources. As against the standard requirement of 66 per cent, area under forest in Almora and Pithoragarh districts of the region is 54 per cent only. The area under the tree cover of required density is reported to be already short by more than 50 per cent. Thus ecologically, the area under

forests is far short of requirement. It is important to preserve the existing forests and expand the effective area under forests, which might even require that villages on the slopes are converted into forests and inhabitants of these villages are rehabilitated in plain areas with suitable alternative assets and occupations.

9.9.6 Human resources with poor economic base cannot withstand the competition in the labour and entrepreneurial market outside, or even within the region. Thus the relationship of the region with other regions takes an exploitative form. In the interest of economic justice to the people of such areas, it seems essential to have provision of some sort of 'protection' for strengthening their economic base, both within or outside the regions.

9.9.7 One sure way of effecting the above mentioned protection may be the evolving of a national policy of giving preferential treatment in the government and semi-government job to the people of such areas. This proposition is also justified on the ground that more than three-fourth of the migrants of such areas could secure only menial and fourth class jobs. ⁺The results of our study reveal that proportion of migrants going to white collar jobs is declining overtime.

It is mainly due to the economic, social and political backwardness of such areas that their natives are unable to withstand the growing competition from other regions. In addition, scope for employment for the workers from the region can be enhanced by launching training programmes for some specialised trades and skills in general demand.

Appendix I : Occupational Distribution of Workers in Kumaon and U.P.

(in '000)

	Almora	Pithora-garh	Nainital	Kumaon	U.P.
Cultivators (I)	175 (73.2)	146 (78.1)	161 (44.7)	482 (61.3)	18958 (58.5)
Agricultural labourers (II)	4 (1.7)	1 (0.5)	69 (19.2)	74 (9.4)	5177 (16.0)
Household industry manufacturing, processing, servi- cing and repairs (Va)	4 (1.7)	4 (2.1)	7 (1.9)	15 (1.9)	1200 (3.7)
Other workers (III, IV, V(b), VI, and IX)	56 (23.4)	36 (19.2)	123 (34.2)	215 (27.3)	7062 (21.8)
Total main workers (I - IX)	239 (100.0)	187 (100.0)	360 (100.0)	786 (100.0)	32397 (100.0)

Note : Figures in parenthesis denote percentages.

Source: Census of India 1981, Primary Census Abstract,
Uttar Pradesh.

Appendix II : Proportion of 1961 Population in Different Age Cohorts in 1971 and Proportion of Gain and Loss in the Population

Concordia

Appendix II Contd.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	
Initial	0	9	232	119	113	74	162	83	79	(+) 13	(-) 5	(+) 4.9	(+) 15.7	(-) 6.3	
10 - 19	10	19	170	96	57	110	63	47	(+) 10	(+) 10	(+) 18.2	(+) 15.9	(+) 21.3		
20 - 29	20	29	130	73	44	112	69	43	(+) 11	(-) 12	(+) 1	(-) 9.8	(-) 17.4	(+) 2.3	
30 - 39	30	39	101	57	42	27	79	49	(-) 10	(-) 7	(-) 3	(-) 12.6	(-) 14.3	(-) 10.0	
40 - 49	40	49	69	45	27	18	52	33	(-) 10	(-) 6	(-) 1	(-) 13.5	(-) 18.2	(-) 5.3	
50 - 59	50	59	45	27	16	11	33	22	(-) 11	(-) 6	(-) 0	(-) 18.2	(-) 27.3	(-) 0	
60 - 69	60	69	27	15	9	6	26	15	(-) 11	(-) 6	(-) 5	(-) 42.3	(-) 40.0	(-) 45.4	
70+	70+														
TOTAL	789	439	350	574	334	240	(-) 17	(-) 14	(-) 3	(-) 3.0	(-) 4.2	(-) 1.2			
Loss by deaths during 1961-71	-	-	-	-	-	-	(-) 12.4	(-) 7.2	(-) 5.2	(-) 2.2	(-) 2.2	(-) 2.2			
Loss by migration during 1961-71	-	-	-	-	-	-	(-) 4.6	(-) 6.8	(+) 2.2	(-) 0.6	(-) 2.0	(+) 0.9			
Kumaon	0	9	543	278	265	215	207	(-) 17	(-) 3	(-) 14	(-) 4.0	(-) 1.4	(-) 6.8		
10 - 19	10	19	405	212	193	422	300	156	144	(-) 18	(-) 0	(-) 6.0	(-) 11.5	(-) 0	
20 - 29	20	29	282	138	144	116	250	127	123	(-) 22	(-) 15	(-) 7	(-) 8.8	(-) 11.8	(-) 5.7
30 - 39	30	39	228	112	116	98	78	182	95	(-) 16	(-) 7	(-) 9	(-) 8.8	(-) 7.3	(-) 10.3
40 - 49	40	49	166	98	78	134	72	62	(-) 21	(-) 10	(-) 11	(-) 15.7	(-) 13.9	(-) 17.7	
50 - 59	50	59	113	62	51	42	35	98	55	(-) 43	(-) 21	(-) 8	(-) 21.4	(-) 23.6	(-) 18.8
60 - 69	60	69	77	42	35	23	16	84	46	(-) 38	(-) 45	(-) 23	(-) 22	(-) 53.6	(-) 50.0
70+	70+														
TOTAL	1853	955	998	1470	766	704	(-) 160	(-) 89	(-) 71	(-) 10.9	(-) 11.6	(-) 10.1			
Loss by deaths during 1961-71	-	-	-	-	-	-	(-) 35.6	(-) 18.5	(-) 17.0	(-) 2.4	(-) 2.4	(-) 2.4			
Loss by migration during 1961-71	-	-	-	-	-	-	(-) 124.4	(-) 70.5	(-) 54.0	(-) 8.4	(-) 9.2	(-) 7.7			

Source : Age Tables of 1961 and 1971 Censuses.

Appendix III
Questionnaire for Households

1. Identification

1.1 Name of the head of the household _____

1.2 Age (in full years) _____

1.3 Caste _____

1.4 Educational qualification _____

1.5 Village _____

1.6 Household occupation (to be determined after the calculation of income)

(i) Main

(ii) Subsidiary

2. Demographic Structure

2.1 Household composition excludes out-migrants

3. Land holding, income and output

3.1 Size of holding (Acre)

Land holding	Owned	One Lease		Total cultivated
		Leased in	Leased out	
Irrigated				
Unirrigated				
TOTAL				

3.2 Income (1979-80)

3.2.1 From agriculture

(a) Particulars of crops grown during 1979-80

Sl. No.	Crops	TOTAL PRODUCTION	
		Quantity (Qtl.)	Value (Rs.)
1.	Paddy		
2.	Madua		
3.	Madira		
4.	Wheat		
5.	Barley		
6.	Masoor		
7.	Other pulses		
8.	Oil seeds		
9.	Potato		
10.	Other Vegetables		
i.			
ii.			
iii.			
TOTAL			

(b) Cost of cultivation

Sl. No.	Items	Quantity (Kg.)	Expenditure (Rs.)
1.	Seed		
2.	Chemical fertilisers		
3.	Compost		
4.	Irrigation		
5.	Crop protection		
6.	Manpower		
7.	Animal power		
8.	Others		
<hr/>			
TOTAL			
<hr/>			

(c) Net income from agriculture (Total value of production - Total cost of cultivation) =

3.2.2 Income from animal husbandry

- (a) Buffaloe
- (b) Cow
- (c) Goat
- (d) Poultry
- (e) Others

TOTAL

3.2.3 Income from other sources

- (a) Artisanship
- (b) Labour
- (c) Business
- (d) Service
- (e) Immovable property
- (f) Others

3.3 Total net income

3.5 Income per capita

4.0 Consumption Pattern

4.1 Details of items consumed during last one month

Sl. No.	Items consumed	Quantity (Kg.)	Amount spent (Rs.)
a.	Wheat		
b.	Rice		
c.	Pulses		
D.	Madua		
e.	Bajra		
f.	Madira		
g.	Vegetables		
h.	Fruits		
i.	Ghee/Oil		
j.	Gur/Sugar		
k.	Salt		
l.	Tobacco/Bedi		
m.	Tea		
n.	Soap		
o.	Others		
<hr/>			
TOTAL			
<hr/>			

4.2 Give the details of expenditures on the following items during last one year :

Items purchased	Amount expended (Rs.)
a. Cloths	
b. Shoes/Chappals	
c. Children's education	
d. others	
TOTAL	

4.3 Give details of expenditures on following items during last two years

Items	Amount expended (Rs.)
a. Utensils	
b. Agricultural implements	
c. Milch/power animals	
d. Furniture/wooden goods	
e. Radio	
f. Jewellery	
g. Watch	
h. Construction/repair of house	
i. Purchase/improvement of agricultural land	
j. Repayment of loan	
k. Others	
TOTAL	

4.4 Did you incur loan to meet the above mentioned expenditure?

YES NO

4.4.1 If yes, please give details

Amount of loan outstanding	Source of loan	Purpose of loan
1.		
2.		
3.		
4.		

4.4.2 If no, do you make any saving after meeting the necessary expenses?

YES NO

4.4.2.1 If yes, indicate in what form the saving is made?

For Migrant Households Only

5.0 Migration Particulars

5.1 Give the following details about the members of household who have migrated out

Sl. No.	Name of out- Migrant	Relation with the head	Age at migra- tion	Sex	Place of birth
	1	2	3	4	5
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					

Sl. No.	Qualifications at migration	Purpose of mi- gration	Name of the Place where migrated					
			Educa- tional	Techni- cal	Village	Town	Dis- trict	State
6	7	8	9	10	11	12	13	
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								

Sl. No.	Period of Migration	Post held/Type of work done at the place of residence	Annual Income during 1980-81		
			14	15	16
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					

5.2 Reasons for migrating out

5.3 Mode of migration

5.4 What were the prospects of job on migration?

- a. Job fixed before migration
- b. Assurance for a job after migration
- c. A hope to find a job on migration

5.5 Was any out-migrant engaged in productive activity before migration?

YES NO

If yes, please give the following details

Sl. no. of migrant	In which work	Estimated income (Rs.)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

5.6 Do out-migrants remit money in cash or in the form of goods?

YES NO

5.6.1 If yes, give the following details

Sl. No. of migrants	Amount Remitted during 1980-81	
	Monthly	Occasionally
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

5.6.2 Details of remittances in kind

Sl. No. of migrants	Goods received during last one year (1980-81)	Estimated value
		(Rs.)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

5.6.3 How did you utilise the above mentioned remittances received in cash

Sl. No.	Items of expenditure	Amount spent (Rs.)
1.		
2.		
3.		
4.		
5.		
6.		
7.		

5.7 Has any out-migrant visited home during last one year?

YES NO

If yes, please give details

5.8 How did migration affect your household occupation and family life?

- a. Decrease in income from agriculture
- b. Reduction in cropped area
- c. Decline in animal husbandry activities
- d. Pressure of work on children and old
- e. Extended work for female
- f. Ill effect on children's education
- g. Lack of proper management of work
- h. Family insecurity
- i. Others (specify)

For all Households

6.0 Do you engage hired labour for agricultural or other operations?

YES NO

If yes, please give the following details

Operations in which hired labour is engaged	Mandays	Wages paid (Rs.)
---	---------	------------------

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